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ABSTRACT

In 1994-95, all Illinois public colleges and universities and some Illinois private colleges and universities are required to submit reviews of their baccalaureate programs in education (primarily teacher preparation programs) and academic programs at all levels in the fields of English language/literature and mathematics. This package of materials was issued preparatory to the campus reviews, to identify issues that should be addressed in the review reports. The background information on analysis of teacher preparation programs discusses program approval by the State Superintendent of Education in consultation with the State Teacher Certification Board, teacher supply and demand trends, comparative costs, program quality and effectiveness, and specific issues that universities are asked to address. The background information on analysis of English language and literature programs focuses on trends in student enrollments and degrees conferred in English programs at Baccalaureate, Master's, and Doctoral levels; speech programs at all three levels; programs in other specialized fields; and issues that universities are asked to address in their review reports. The background information on analysis of mathematics programs outlines enrollment and annual degrees conferred at the Bachelor's, Master's, and Doctoral levels and specific issues to be addressed in program review reports. (JDD)

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STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

PUBLIC UNIVERSITY PROGRAM REVIEW: STATEWIDE ANALYSES

By statute, the Board of Higher Education is responsible for periodically reviewing academic programs offered by all public colleges and universities and by some private colleges and universities. As part of the P•Q•P initiative, the state-level program review process for public university academic programs was revised in 1993-94. This revision calls for public universities to submit reviews of similar programs in the same year within an eight-year review cycle and for the Board of Higher Education staff to identify issues to be addressed in a statewide analysis the year prior to the campus reviews.

The first programs reviewed under this revised process were health professions' education programs. The statewide analysis, *Policy Issues in Education for the Health Professions*, was presented to the Board in May 1993, followed by the adoption of policy recommendations, *Policy Recommendations for Health Professions' Education*, in September 1993. Campus reviews of health professions' education programs were submitted to the Board as part of the annual Resource Allocation and Management Program (RAMP) in July 1994. The results of campus reviews of health professions' education programs will be reported to the Board in the fall, along with recommendations for any further program changes indicated.

University program reviews to be completed in 1994-95 include baccalaureate programs in education, primarily teacher preparation programs, and academic programs at all levels in the fields of English language and literature and mathematics. Item #5A presents the statewide analysis of undergraduate teacher preparation programs, as well as statewide issues to be addressed by the universities during their reviews. Item #5B presents the statewide analysis of English language and literature programs at all levels, and Item #5C presents the statewide analysis of mathematics programs at all levels.

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STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

REVIEW OF UNDERGRADUATE TEACHER PREPARATION PROGRAMS:
STATEWIDE ANALYSIS

By statute, the Board of Higher Education is responsible for periodically reviewing academic programs offered by all public colleges and universities and by some private colleges and universities. As part of the P•Q•P initiative, the state-level program review process for public university academic programs was revised in 1993-94. This revision calls for public universities to submit reviews of similar programs in the same year within an eight-year review cycle and for the Board of Higher Education staff to identify issues to be addressed in a statewide analysis the year prior to the campus reviews.

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University program reviews to be completed in 1994-95 include baccalaureate programs in education, primarily teacher preparation programs, and academic programs at all levels in the fields of English language and literature and mathematics. The purpose of this report is to present a statewide analysis and to define issues in teacher education preparatory to the public universities' reviews of baccalaureate teacher preparation programs during 1994-95. Following an initial section on program approval, the analysis is presented in three sections: Supply and demand trends, comparative costs, and program quality and effectiveness. The concluding section presents specific issues the universities are asked to address in their review reports submitted in July 1995.

Program Approval and Review

State statute requires that programs preparing teachers for the public schools must be approved by the State Superintendent of Education in consultation with the State Teacher Certification Board which is housed within the State Board of Education. The State Teacher Certification Board and the Board of Higher Education have each established criteria for program approval and for periodic review. Differences in statutory authority result in differences in the definition of what constitutes a "program." Since the Board of Higher Education is responsible for authorizing institutions to grant degrees, the Board of Higher Education defines a program as an identifiable curriculum that leads to a specific degree -- for example, a B.S. in Elementary Education. The State Teacher Certification Board defines a program as "a structured sequence of learning activities and experiences" designed to meet the requirements for certification and endorsement. State statute describes four teaching certificates: early childhood (birth through grade 3), elementary (Kindergarten through grade 9), high school (grades 6 through 12), and specialist (Kindergarten through grade 12).

The difference in definition of a program results in differences in the way programs are counted in each system, that is, the number of institutions offering teacher preparation programs and the

number of programs that are offered in what fields for which type of certification. This difference is most apparent for programs preparing high school teachers. To illustrate, most students preparing to teach at the high school level earn their degree with a major in the discipline they plan to teach, while also completing the specific coursework in education that is necessary for certification. Thus, in the Board of Higher Education's data system, students planning to teach high school English usually enroll in and graduate with a B.A. in English rather than a B.S. in Secondary Education. Not all students who earn a B.A. in English, however, are preparing to teach. Thus, Board of Higher Education degrees-conferred data are not accurate measures of the supply of new teachers, especially at the secondary level.

The State Teacher Certification Board has approved 24 institutions (11 public universities and 13 private colleges and universities) to offer programs leading to early childhood certification, 51 institutions (12 public universities and 39 private colleges and universities) to offer programs leading to elementary certification, and 50 institutions (12 public universities and 38 private colleges and universities) to offer programs leading to secondary certification in at least one teaching field. Programs leading to specialist certification are offered in art by 25 institutions, in music by 33 institutions, in physical education by 26 institutions, and in one or more of the seven categories of special education by 25 institutions.

Both the Board of Higher Education and the State Teacher Certification Board also periodically review previously approved programs in education. The State Teacher Certification Board requires institutions to submit a self-study and then conducts a site visit every five years to judge compliance with Board-established standards and criteria. The revised Board of Higher Education program review process requires public universities to review similar programs on an eight-year cycle. At the campus level, program review is the primary vehicle for improving the quality and effectiveness of programs. At both the campus and state levels, the program review process provides the information on program need and quality necessary for setting priorities and evaluating productivity in the Priorities, Quality, and Productivity (P•Q•P) initiative.

The results of previous program reviews, as well as statewide capacity and cost trends, served as the basis for staff's P•Q•P recommendations on program eliminations and consolidations in October 1992. Only nine baccalaureate programs in education offered by four public universities were included on the list of 190 recommended eliminations. Of these nine, four have been eliminated, two are in process of elimination, two are being reviewed further, and one was consolidated into another, related program. The staff also recommended that one university consider consolidating secondary teacher preparation programs offered by more than one college within the university. To date, two programs were eliminated, with other actions to be included in the campus' 1994 P•Q•P report. In addition to action on staff recommendations, one campus chose to eliminate six program options leading to secondary certification, two campuses eliminated three programs, and one is downsizing its program in elementary education.

Teacher Supply and Demand Trends

Many variables affect the supply of and demand for teachers. Demand depends upon the number of students enrolled in schools by grade level, the type of programs offered by elementary schools and the number of subjects offered by high schools, class size, and the financial resources available to schools to expand the number of teachers or to replace those leaving. Supply depends on the number of teachers already employed, the turnover rate, the number of newly prepared teachers, previously certified teachers seeking to re-enter teaching after an absence, uncertified degree-holders seeking teaching positions in nonpublic schools that do not require certification, and the availability of other job opportunities perceived to be more attractive.

State and National Trends and Projections

In Illinois, the number of enrolled pre-Kindergarten through eighth grade children reached its nadir in 1986-87, increasing steadily since then to just under 1.6 million in 1991-92, representing a growth rate of about five percent. The number of enrolled high school students declined by 12 percent from 1985-86 to 1990-91, increasing again by less than one percent to 589,000 in 1991-92. Between 1985-86 and 1991-92, the number of pre-Kindergarten teachers increased by 82 percent, Kindergarten teachers increased by 22 percent, and both elementary and special education teachers increased by nine percent, while the number of secondary teachers declined by five percent.

Through the 1980s, the turnover rate of full-time public school teachers averaged six percent downstate and five percent in the Chicago Public Schools, representing an average of 5,000 teachers per year. The turnover rate of full-time special education teachers averaged nine percent, or about 1,400 teachers, per year. Throughout the 1970s and 1980s, the annual retirement rate for public school classroom teachers averaged two percent, or about 2,100 teachers, per year. However, the total number of Illinois public school teachers retiring as a result of the retirement-incentive program adopted by the General Assembly in 1993 may reach as high as 10 percent in 1994, the second and final year of the two-year program.

Table 1 compares past trends in teacher supply and demand from State Board of Education data, trends in degrees conferred from Board of Higher Education data, and projections of teacher demand from the Illinois Occupational Information Coordinating Committee (IOICC) and from the U.S. Department of Labor's Bureau of Labor Statistics (BLS). As the table shows, the supply trends by certification level differ when comparing State Board of Education and Board of Higher Education information, due to differences in definition of program described above. The Board of Higher Education data include only students earning a degree in education, while the State Board of Education data include baccalaureate students completing certification requirements no matter their particular major, as well as post-baccalaureate students completing certification requirements during the year. While the numbers differ, the trends are similar, with two exceptions. First, Board of Higher Education data recorded a sharp decline in fiscal year 1993 in the number of students earning bachelor's degrees in elementary education, while the decline in the number of certification completers was much smaller. Second, the number of bachelor's degrees awarded in secondary education has been steady for the past four years, while the number of certification completers has risen slightly.

State Board of Education-reported demand trends show a sharp increase in demand for Kindergarten and pre-Kindergarten teachers about 1990, although the number of unfilled vacancies declined thereafter. The average annual openings for early childhood teachers projected by the IOICC, however, exceed the current annual supply of newly certified early childhood teachers and, in *Outlook 1990-2005*, the BLS projects national employment growth rates of 41 percent for preschool and kindergarten teachers under a moderate economic growth scenario, a projection twice the projected growth rate of 20 percent for all occupations. The projected annual openings for elementary teachers in Illinois appears to balance recent supply, although the BLS projects a national employment growth rate of 23 percent through the year 2005.

The demand for secondary teachers has fluctuated, with an overall slight increase. Annual projected job openings, which include also secondary specialists and vocational education teachers, considerably exceed recent trends in new hires but are only slightly higher than the current supply in Illinois. On the other hand, the BLS projects a growth rate of 34 percent for secondary teachers and 27 percent for vocational education and training instructors. Supply and demand for secondary teachers, however, are not balanced within teaching fields. The demand for secondary-level English as a second language teachers as measured by the number of unfilled vacancies, for example, is both high and increasing rapidly. The number of unfilled vacancies in English and in the physical and life

Table 1

ILLINOIS TEACHER SUPPLY AND DEMAND COMPARISONS AND PROJECTIONS

	1988	1989	Past Trends		1992	1993	Illinois Projected Annual Openings	National Projected Growth Rate
Early Childhood Education							642	41 %
<u>Supply Trends</u>								
Graduates from BHE—approved Baccalaureate Programs	175	197	219	260	389	206		
SBE Certification Completers	164	240	228	222	362	420		
<u>Demand Trends</u>								
Number of FTE Unfilled Public School Vacancies as of December 1: Pre-Kindergarten & Kindergarten			82.5	3.5	1.0			
Elementary Education							2,635	23 %
<u>Supply Trends</u>								
Graduates from BHE—approved Baccalaureate Programs	2,073	2,071	2,496	2,469	2,749	1,788		
SBE Certification Completers	2,573	2,552	2,954	2,841	3,644	3,138		
<u>Demand Trends</u>								
New Hires of Beginning Teachers (Public Schools only)	1,396 ¹	1,493 ¹	1,890 ¹	2,769 ¹				
Percent of Graduates Who Reported Teaching Employment:								
In—State		35.5 %	37.4 %	44.7 %				
Out—of—State		7.8	9.3	7.6				
Number of FTE Unfilled Public School Vacancies as of December 1: Regular Elementary			76.0	0.5	1.0			
Secondary Education							2,310	34 %
<u>Supply Trends</u>								
Graduates from BHE—approved Baccalaureate Programs	1,154	1,257	1,346	1,319	1,377	1,346		
SBE Certification Completers	2,142 ²	1,807 ²	1,949 ²	1,354	1,703	1,696		
<u>Demand Trends</u>								
New Hires of Beginning Teachers (Public Schools only)	646	551	544	760				
Percent of Graduates Who Reported Teaching Employment:								
In—State		31.4 %	38.5 %	41.4 %				
Out—of—State		6.2	7.7	6.9				
Number of FTE Unfilled Public School Vacancies as of December 1: (includes Secondary Specialists)			25.5	17.3	32.5			

Table 1, Continued

ILLINOIS TEACHER SUPPLY AND DEMAND COMPARISONS AND PROJECTIONS

	Past Trends						Illinois Projected Annual Openings	National Projected Growth Rate
	1988	1989	1990	1991	1992	1993		
K-12 Specialists (Art, Music, Physical Education)								
<u>Supply Trends</u>								
Graduates from BHE-approved Baccalaureate Programs	600	623	673	656	710	582		
SBE Certification Completers	2	2	2	618	796	699		
<u>Demand Trends</u>								
Number of FTE Unfilled Public School Vacancies as of December 1: (Elementary Specialists only)			154.0	10.1	44.6			
Special Education							400	40 %
<u>Supply Trends</u>								
Graduates from BHE-approved Baccalaureate Programs	475	445	479	530	622	530		
SBE Certification Completers	836	820	746	841	1,377	1,156		
<u>Demand Trends</u>								
New Hires of Beginning Teachers (Public Schools only)	599	569	550	608				
Percent of Graduates Who Reported Teaching Employment:								
In-State		40.9 %	47.2 %	49.7 %				
Out-of-State		6.2	6.8	4.9				
Number of FTE Unfilled Public School Vacancies as of December 1: (Baccalaureate-level Only)			158.4	111.1	263.2			

¹Includes early childhood teachers (pre-Kindergarten and Kindergarten)²Specialist certificate completers are included with secondary for fiscal years 1988 through 1990.

Sources: BHE Degrees Conferred Surveys,

SBE, *Illinois Teacher Supply and Demand, 1988-89* (Aug 1990); *Illinois Teacher Supply and Demand: 1989-90 and 1990-91* (Oct 1992),

SBE Entitlement Certificate Completers, Fiscal Years 1991, 1992, and 1993,

Illinois Occupational Information Coordinating Committee, *Illinois Occupational Employment, 1990-2005*, andU.S. Department of Labor, Bureau of Labor Statistics, *Outlook 1990-2005*

sciences at the secondary level is also increasing, while the supply of teachers prepared in history and social studies appears to exceed the number of available positions. Of particular concern is the number of secondary teachers being prepared for endorsement in such fields as geography, psychology, and sociology in which few high schools offer sufficient numbers of classes to warrant full-time teachers. Supply and demand for specialists in art, music, and physical education at the secondary level are in balance, but music, art, and physical education specialists at the elementary level are in increasing demand, as measured by the annual number of unfilled vacancies. Also in high demand are elementary school bilingual teachers in a wide number of languages.

Unmet demand, based on past unfilled vacancies, is highest, and growing, for teachers in the special education categories of behavior disorders and learning disabilities and has recently grown for teachers of hearing-impaired children. The number of unfilled vacancies for teachers of children who are blind or visually impaired has slackened. Recent federal mandates to teach children in the least restrictive environment, known variously as inclusion or mainstreaming in regular classrooms, may dramatically change the demand picture for special education teachers in the future. Although the IOICC projections of average annual openings for special education teachers in Illinois are below recent trends both in supply and in new hires, the BLS projects a 40 percent national growth rate.

These supply and demand data describe availability but not the quality of the teaching force. In *America's Teachers: Profile of a Profession* (May 1993), the U.S. Department of Education's National Center for Education Statistics (NCES) provided comparisons by state, using academic year 1987 data. While individual data elements are no longer current, the relative positions among states are relevant. The report indicated that, in academic year 1987, 47 percent of the 2.3 million full-time-equivalent public school teachers nationally held degrees above the baccalaureate. Although 89 percent held regular teaching certificates in their assigned teaching field, 20 percent believed they were unqualified in the subjects they were teaching. Forty percent of school districts nationally at that time reported difficulty in finding qualified applicants to fill vacancies. Drawing data from this report, Table 2 compares Illinois with the six other largest states and with five neighboring states. While the proportion of Illinois teachers with degrees above the bachelor's exceeds the national average, the proportion is lower than proportions in New York, Pennsylvania, Indiana, and Kentucky. The proportion holding regular certificates in their assigned field is lower than the national average and lower than all comparison states except New York, California, and Florida. A slightly higher percentage of school districts in Illinois reported difficulty in finding qualified applicants to fill vacancies. The average starting salary for teachers in Illinois with a bachelor's degree and no experience was also lower in 1987 than the national average and lower than all comparison states except Missouri and Iowa.

The State Board of Education follow-up information reported earlier in Table 1 indicated that fewer than 50 percent of the Illinois-prepared teachers find teaching positions in Illinois. Tables 3 and 4 present follow-up information from the public universities' surveys of their baccalaureate graduates one year after graduation for the class of 1991 and five years after graduation for the class of 1988. The information on education-degree graduates presented in Table 3 indicates that nearly three-quarters of the full-time employed education majors in both years were employed in education-related occupations at the time they were surveyed. In *New Teachers in the Job Market, 1991 Update* (August 1993), NCES reported that 91 percent of the newly qualified teachers who earned bachelor's degrees in 1991 were employed within one year of graduating, with 73 percent employed full time, a percentage comparable to the employment rate in the Illinois public universities' follow-up study of the class of 1991. Table 3 also suggests that education majors who find full-time jobs in education tend to stay in Illinois at higher rates than do those who find jobs outside of education, at about 80 percent compared with 50 percent, and that a higher proportion are employed full-time in education and employed full-time in education in Illinois five years after graduation than were so employed one year after graduation.

Table 2

**THE PUBLIC SCHOOL TEACHING PROFESSION, 1987
ILLINOIS COMPARED TO SIMILAR AND NEIGHBORING STATES**

	FTE Public School Teachers	Percent with Degrees Above BA/BS	Percent with Regular Certificate in Assigned Field	Percent Reporting Unqualified in Subjects They're Teaching	Average Number of Students per Class	Current Expenditure per Average- Daily- Attendance Student	Average Scheduled Salaries		Percent Districts Reporting Difficulty Finding Qualified Applicants
							Bachelor's, No Experience	Master's, 20 Years	
National	2,279,241	47.3 %	88.7 %	20 %	23	\$ 4,648	\$ 17,180	\$ 28,416	39.9 %
ILLINOIS	105,217	48.5	86.8	18	23	4,789	16,364	28,097	42.3
New York	170,236	67.7	81.2	14	22	7,839	18,747	35,154	52.1
Pennsylvania	103,307	51.6	91.1	15	23	5,469	17,859	31,074	32.0
California	195,864	44.6	86.2	28	28	4,209	20,704	34,165	40.1
Ohio	99,708	43.8	89.0	20	24	4,382	16,533	30,716	27.4
Florida	95,857	40.4	82.7	16	26	4,485	18,679	28,539	62.5
Texas	187,159	34.7	88.0	19	22	3,955	16,632	27,754	50.3
Indiana	53,749	84.5	93.3	19	23	4,158	17,154	29,867	30.5
Kentucky	35,239	75.4	89.0	25	24	3,300	16,494	25,675	36.7
Missouri	49,632	46.7	95.6	15	22	4,150	15,897	22,033	30.3
Wisconsin	47,721	36.8	93.9	17	22	5,204	17,528	30,123	23.8
Iowa	30,873	33.8	93.8	18	21	4,520	16,259	25,010	30.6

Source: NCES, *America's Teachers: Profile of a Profession*, May 1993

Table 3

**OCCUPATION AND LOCATION OF FULL-TIME EMPLOYED PUBLIC UNIVERSITY EDUCATION MAJORS
ONE AND FIVE YEARS AFTER RECEIVING A BACCALAUREATE DEGREE**

	Education Majors Employed Full Time				Number and Percent of Full-Time Employed Education Majors Employed in Illinois			
	Class of 1991		Class of 1988		Class of 1991		Class of 1988	
	Number	Percent of Total Full-Time Employed Education Majors	Number	Percent of Total Full-Time Employed Education Majors	Number	Percent	Number	Percent
Employed in Education Occupations	892	72 %	743	74 %	690	77 %	597	80 %
Child care teacher	52	4 %	12	1 %	36	69 %	11	92 %
Pre-school or elementary teacher	410	33 %	390	39 %	332	81 %	335	86 %
Special education teacher	192	15 %	142	14 %	145	76 %	107	75 %
Secondary or vocational teacher	108	9 %	103	10 %	89	82 %	79	77 %
Teacher aide	51	4 %	13	1 %	36	71 %	10	77 %
College/university faculty member	4	0 %	11	1 %	3	75 %	8	73 %
Counselor or adviser	8	1 %	7	1 %	3	38 %	5	71 %
Administration	17	1 %	12	1 %	6	35 %	10	83 %
Other education occupations	50	4 %	53	5 %	40	80 %	32	60 %
Not Employed in Education	350	28 %	255	26 %	178	51 %	128	50 %
TOTAL	1,242	100 %	998	100 %	868	70 %	725	73 %

Source: Public Universities' Follow-up Surveys of Baccalaureate Graduates

Table 4 presents information on survey respondents in both years who indicated they were employed full-time in education occupations regardless of major. In both years, nearly 90 percent of those employed as full-time elementary and special education teachers majored in education at the university from which they graduated, while fewer than half of those employed full time as secondary teachers were education majors. In addition, Table 4 shows that the vast majority of those employed full time as elementary, special education, or secondary teachers are employed in schools. On the other hand, very few of the class of 1991 graduates and none of the class of 1988 graduates who reported full-time employment as child day care teachers are employed by schools. About a quarter of those employed in education are employed in positions other than classroom teaching.

The supply and demand information examined in this section provides a mixed picture. On the one hand, past trends suggest that the supply of and demand for elementary teachers and for specialists in art, music, and physical education at the secondary level may be in balance. Demand appears to exceed supply for early childhood teachers; for elementary-level art, music, and physical education teachers and for bilingual teachers; for high school English as a second language, English, and science teachers; and for special education teachers, particularly for working with learning disabled, socially and emotionally disabled, and hearing impaired children and with children with multiple disabilities. Supply appears to exceed demand in specialized areas in the social sciences in which few high schools offer a sufficient number of classes to necessitate hiring full-time teachers. On the other hand, final information on actual retirements during 1992-93 and 1993-94, which is not yet available, is expected to dramatically affect in-state teaching employment opportunities at least in the short term. Supply and demand trends at all levels warrant continued close monitoring.

Public University Trends

Table 5 summarizes information on the baccalaureate-level teacher certification completers by gender, by racial/ethnic group, and by certification type at the nine public university members of the American Association of Colleges for Teacher Education in fiscal years 1991, 1992, and 1993. Table 5 shows that Illinois State University, which has a statewide mission and national reputation in education, continues to prepare the largest number of certified teachers in Illinois. Table 5 also shows that more than three-quarters of baccalaureate-level prepared teachers are women and 90 percent are white. The number of black and Hispanic teacher certification completers is small and appears to be declining, while the number of completers from other minority groups, which is also small, appears to be increasing slightly. By certification type, the proportion of early childhood, secondary, and special education completers has increased in the past three years, while the number and proportion of elementary and K-12 specialist completers have declined. More detailed information on the number of completers by subject endorsement indicates that the number of completers has fluctuated from year to year. The trend, however, appears to be down for business education, technical and career education, and K-12 physical education specialists and up in the special education categories of behavior disorders and hearing impairments.

Comparative Costs

The Board of Higher Education annually collects unit cost and faculty assignment information from the public universities by discipline and level of instruction. No comparable information is available for private institutions. Tables 6 and 7 depict public university costs and faculty assignment data for fiscal years 1992 and 1993 for baccalaureate instruction in teacher preparation and all other education courses, respectively. Together, the tables show that courses offered at the baccalaureate level in education produced 340,703 credit hours in fiscal year 1992 and 320,473 credit hours in fiscal year 1993, for an overall decline of six percent. In both years, baccalaureate credit hours in education accounted for eight percent of the total baccalaureate credit hours produced by the public universities. The majority (59 percent) of baccalaureate education credit hours generated are at the upper-division level in teacher preparation programs, as shown on Table 6.

Table 4
EDUCATION OCCUPATIONS OF FULL-TIME EMPLOYED RESPONDENTS
BY MAJOR AND TYPE OF EMPLOYER

Occupation/Major	Class of 1991 (One Year Later)				Class of 1988 (Five Years Later)			
	School	College/ University	Other	Total	School	College/ University	Other	Total
Child Care/Day Care Teacher								
Education	4	8	40	52		1	11	12
Liberal Arts/Humanities			3	3			1	1
Science/Math		1	3	4				
Social Sciences	1		11	12			2	2
Other	3	1	28	31			9	9
Subtotal	8	10	84	103		1	23	24
Pre-School/Elementary Teacher								
Education	384		26	410	381		9	390
Liberal Arts/Humanities	4		3	7	11			11
Science/Math	8			8	4			4
Social Sciences	11		1	12	8			8
Arts	5			5	5			5
Other	27		6	33	20		2	22
Subtotal	439		36	475	429		11	440
Special Education Teacher								
Education	155	5	32	192	127	2	12	141
Health	1			1	2			2
Liberal Arts/Humanities	2		1	3	1			1
Science/Math	1			1	3			3
Social Sciences	3		1	4	4		1	5
Arts					1			1
Other	7	1	2	10	2		2	4
Subtotal	169	6	36	211	140	2	15	157
Secondary or Vocational Teacher								
Education	103		5	108	95	2	6	103
Agriculture	2			2	4			4
Business					6		1	7
Liberal Arts/Humanities	29		5	34	35		2	37
Science/Math	44			44	43			43
Social Sciences	9		3	12	21			21
Arts	6		1	7	10		1	11
Other	9	1	2	12	5		1	6
Subtotal	203	1	16	219	219	2	11	232
Teacher Aide								
Education	39		12	51	13			13
Liberal Arts/Humanities	6			6	1		1	2
Science/Math	3	1		4	1			1
Social Sciences	4	1	2	7	1			1
Arts	1			1	1			1
Other	4	1	21	26	3			3
Subtotal	57	3	35	95	20		1	21
Other Education Occupations								
Education	37	11	31	79	23	30	30	83
Accounting/Business		7	4	11	1	5	3	9
Communication		3		3	2	4	4	10
Engineering			3	3		1	1	2
Engineering Tech		1	14	15	1		3	4
Health and Nursing			4	4	1	5	3	9
Liberal Arts/Humanities	9	13	12	34		20	7	27
Science/Math	9	8	2	19	2	10	2	14
Social Sciences	5	14	8	27	9	17	12	38
Arts	3	1		4	4	2		6
Other	6	14	74	94	7	11	10	28
Subtotal	69	72	152	293	50	105	75	230
TOTAL	944	92	359	1,396	858	110	136	1,104

Source: Public Universities' Follow-up Surveys of Baccalaureate Graduates

Table 5
PUBLIC UNIVERSITY COMPLETERS OF BASIC (BACCALAUREATE) TEACHER CERTIFICATION

		Chicago State	Eastern Illinois	Illinois State	Northeastern Illinois	Northern Illinois	Southern Illinois at Carbondale	Southern Illinois at Edwardsville	University of Illinois at Urbana	Western Illinois	Total	Percent of Total
TOTAL	1991	75	673	768	228	520	274	429	382	388	3,737	
	1992	109	697	727	300	529	384	507	467	443	4,163	
	1993	53	430	689	293	352	287	444	288	308	3,144	
By Gender												
Male	1991	19	289	122	45	52	67	103	76	88	861	23.0 %
	1992	26	300	111	72	90	68	105	93	95	960	23.1
	1993	13	102	95	54	70	95	80	65	65	639	20.3
Female	1991	54	384	646	183	468	207	326	306	266	2,840	76.0
	1992	83	397	616	228	469	316	402	374	316	3,201	76.9
	1993	40	328	594	273	324	203	364	223	170	2,519	80.1
By Race/Ethnicity												
Black	1991	52	32	13	12	10	10	34	8	12	183	4.9 %
	1992	84	42	9	8	7	4	32	6	10	202	4.9
	1993	38	3	11	9	5	17	21	8	5	117	3.7
Hispanic	1991	2	5	5	25	9	2	1	10	5	64	1.7
	1992	5	6	5	24	13	4	6	10	5	78	1.9
	1993	2	1	2	17	7	1	4	8	3	45	1.4
White	1991	16	631	744	187	493	257	392	355	332	3,407	91.2
	1992	19	640	711	261	531	366	466	435	388	3,817	91.7
	1993	12	425	668	161	374	277	417	254	225	2,813	89.5
Other	1991	3	5	6	4	5	5	2	9	4	43	1.2
	1992	0	9	2	7	4	8	3	16	7	56	1.3
	1993	1	1	8	17	6	1	2	18	2	56	1.8
By Certification Type												
Early Childhood	1991	3	8	57	3		15	39	7	22	154	4.1 %
	1992	15	7	54	6	15	27	33	21	31	209	5.0
	1993	2	27	41	11	12	21	36	17	13	180	5.7
Elementary ¹	1991	28	229	366	146	310	120	160	110	170	1,639	43.9
	1992	43	341	259	126	245	184	206	141	183	1,728	41.5
	1993	15	159	223	136	179	95	125	91	100	1,123	35.7
Secondary	1991	20	150	172	63	68	92	88	369	84	1,106	29.6
	1992	25	204	178	39	132	127	106	374	103	1,288	30.9
	1993	13	132	180	45	111	127	101	271	93	1,073	34.1
K-12 Specialist	1991	6	39	36		42	20	32	58	38	271	7.3
	1992	3	37	39		51	19	32	70	35	286	6.9
	1993	4	15	25		27	23	18	25	21	158	5.0
Special Education	1991	13	125	263	14	100	63	46	3	62	689	18.4
	1992	8	109	291	30	116	81	69	4	73	781	18.8
	1993	9	67	320	38	65	59	87	8	92	745	23.7

¹Includes combined early childhood and elementary, bilingual, and middle school completers.

Source: Public universities' reports to the American Association of Colleges for Teacher Education/National Association for Accreditation of Teacher Education, 1991 through 1993

Table 6

PUBLIC UNIVERSITY EDUCATION DISCIPLINE COSTS
Baccalaureate-Level Teacher Education Courses

	Fiscal Year 1992					Fiscal Year 1993					Percent Change, 1992 to 1993				
	Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour		Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour		Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour	
				Direct Salary	Total Instruction ¹				Direct Salary	Total Instruction ¹				Direct Salary	Total Instruction ¹
Lower Division	67,524	72.92	926	\$ 36.31	\$ 109.78	62,378	68.80	907	\$ 37.94	\$ 115.00	(7.6)%	(5.7)%	(2.1)%	4.5 %	4.8 %
Chicago State	310	0.45	689	57.89	250.30	236	0.29	814	70.45	212.46	(23.9)	(35.6)	18.1	21.7	(15.1)
Eastern Illinois	19,595	17.72	1,106	34.32	107.86	19,177	19.17	1,000	39.28	118.72	(2.1)	8.2	(9.5)	14.5	10.1
Governors State															
Northeastern	3,557	4.96	717	50.00	129.54	3,012	4.62	652	63.17	148.38	(15.3)	(6.9)	(9.1)	26.3	14.5
Western Illinois	6,536	8.04	813	47.92	133.87	4,903	6.39	767	53.28	151.04	(25.0)	(20.5)	(5.6)	11.2	12.8
Illinois State	11,121	10.70	1,039	33.73	98.65	8,560	8.38	1,021	31.03	112.17	(23.0)	(21.7)	(1.7)	(8.0)	13.7
Northern Illinois	13,008	13.30	978	29.67	98.95	12,917	13.52	955	31.47	96.72	(0.7)	1.7	(2.3)	6.1	(2.3)
Sangamon State															
SIU/Carbondale	10,006	13.39	747	35.01	103.00	11,131	12.67	879	31.07	98.25	11.2	(5.4)	17.6	(11.3)	(4.6)
SIU/Edwardsville	2,565	3.12	822	47.42	146.65	1,720	2.27	758	52.63	160.79	(32.9)	(27.2)	(7.8)	11.0	9.6
U of I/Chicago	274	0.17	1,612	45.93	134.77	200	0.16	1,250	23.99	64.93	(27.0)	(5.9)	(22.4)	(47.8)	(51.8)
U of I/Urbana	552	1.07	516	44.14	104.43	522	1.33	392	60.37	127.78	(5.4)	24.3	(23.9)	36.8	22.4
Upper Division	200,725	240.00	836	\$ 49.17	\$ 136.97	188,585	235.26	802	\$ 51.91	\$ 143.54	(6.0)%	(2.0)%	(4.2)%	5.6 %	4.8 %
Chicago State	2,274	3.15	722	60.04	247.19	2,762	3.78	731	83.39	241.81	21.5	20.0	1.2	38.9	(2.2)
Eastern Illinois	28,793	29.84	965	42.31	122.09	28,758	31.67	908	46.67	133.50	(0.1)	6.1	(5.9)	10.3	9.3
Governors State	4,172	7.46	559	44.69	174.09	4,106	9.42	436	52.17	180.43	(1.6)	26.3	(22.1)	16.7	3.6
Northeastern	13,263	20.48	648	65.25	158.90	13,791	21.42	644	64.98	160.70	4.0	4.6	(0.6)	(0.4)	1.1
Western Illinois	16,858	22.83	738	66.91	165.93	15,721	22.26	706	68.79	175.83	(6.7)	(2.5)	(4.4)	2.8	6.0
Illinois State	47,041	60.29	780	55.91	147.49	38,071	48.47	785	54.92	154.25	(19.1)	(19.6)	0.7	(1.8)	4.6
Northern Illinois	33,522	36.40	921	38.19	122.92	33,989	39.63	858	46.06	128.26	1.4	8.9	(6.9)	20.6	4.3
Sangamon State	2,155	1.53	1,408	26.41	144.82	1,537	1.61	955	44.12	171.79	(28.7)	5.2	(32.2)	67.1	18.6
SIU/Carbondale	22,420	29.32	765	49.71	130.29	23,211	28.26	821	48.42	132.26	3.5	(3.6)	7.4	(2.6)	1.5
SIU/Edwardsville	19,458	22.36	870	48.76	121.69	16,841	19.58	860	50.16	130.01	(13.4)	(12.4)	(1.2)	2.9	6.8
U of I/Chicago	5,385	2.34	2,301	24.46	82.48	5,131	3.21	1,598	22.05	69.58	(4.7)	37.2	(30.5)	(9.9)	(15.6)
U of I/Urbana	5,384	4.00	1,346	31.96	126.62	4,667	5.95	784	46.94	156.03	(13.3)	48.8	(41.7)	46.9	23.2

¹Excluding costs of physical plant

Sources: Academic Discipline Unit Cost Studies and Faculty Credit Hour Studies for Public Universities

Table 6 shows that, between fiscal year 1992 and 1993, lower-division credit hours in teacher education declined by 7.6 percent and the number of staff-year faculty declined by 5.7 percent, resulting in an increase of 4.8 percent in total instructional costs per credit hour. At the upper-division level, credit hours declined by six percent and faculty staff-years declined by two percent, also resulting in a 4.8 percent increase in total instructional costs per credit hour. At the upper-division level, only Chicago State University increased both the number of credit hours and faculty staff-years while at the same time decreasing total instructional costs per credit hour. On the opposite end of the continuum, the University of Illinois at Urbana-Champaign reduced the number of credit hours by 13.3 percent while increasing the faculty-staff years by 48.8 percent, thereby increasing the instructional cost per credit hour by 23.2 percent. The campus' total instructional costs per credit hour in fiscal year 1993 were only slightly higher than average, however. Eastern Illinois, Governors State, and Sangamon State Universities also reduced credit hours while increasing faculty staff-years, resulting in higher total instructional costs per credit hour, while the University of Illinois at Chicago's reduced credit hours and increased faculty staff years resulted in reduced total instructional costs per credit hour. On average, total instructional costs per credit hour for lower-division teacher education courses were slightly above the lower-division average for all fields in both years, while upper-division total instructional costs per credit hour in teacher education were slightly below the all-field average in both years.

Table 7 reports credit hours, staff years, and instructional costs for all other baccalaureate education courses that were not directly attributable to any specific teacher preparation program in fiscal years 1992 and 1993. Such courses include, for example, instructional media, tests and measurements, and the social, historical, and philosophical foundations of education. Credit hours generated in these other education courses accounted for just over 20 percent of the total education credit hours in both years. At the lower-division level, the number of credit hours declined by 15.6 percent, with a nearly corresponding decline in faculty staff years of 14.5 percent. Total instructional costs per credit hour increased by 19.3 percent, however. Although total instructional costs increased in eight of the nine universities offering courses in this category, the magnitude of the average increase is due to the sharp increase in total instructional costs reported by Southern Illinois University at Carbondale, which were nearly double the lower-division average in fiscal year 1993. Eastern Illinois University was the only university to increase both the number of credit hours and faculty staff-years in other lower-division education courses while decreasing total instructional costs per credit hour.

At the upper-division level, the number of credit hours and faculty staff years in these other education courses declined slightly from fiscal year 1992 to 1993, while total instructional costs per credit hour increased. At Eastern Illinois University, Governors State University, Northeastern Illinois University, and Southern Illinois University at Carbondale both the number of credit hours and faculty staff-years decreased, while costs per credit hour increased by 15 percent or more. While Illinois State University reported the highest percentage cost per credit hour increase at 31.1 percent, the number of credit hours generated increased by 56.0 percent. Western Illinois University and Northern Illinois University both increased the number of credit hours in other upper-division education courses while decreasing faculty staff-years and costs per credit hour.

A major factor driving the costs of teacher education programs is the need to provide students both pre-teaching and student teaching clinical experiences. In 1990, the staff surveyed the public universities on the costs associated with the provision of clinical experiences. The primary costs are for supervision both by university faculty members and advanced graduate students and by cooperating teachers within the schools. Typically, compensation is provided to supervising classroom teachers through contracts directly with a school or district or directly with individual teachers or through tuition waivers granted to teachers. The results of the survey indicated that, in fiscal year 1989, public universities placed a total of 40,103 students in schools, of which 33,481 students were participating in pre-teaching assignments, 4,682 students were student teaching, and 1,940 were graduate students

Table 7

PUBLIC UNIVERSITY EDUCATION DISCIPLINE COSTS
Other Baccalaureate-Level Courses in Education

	Fiscal Year 1992					Fiscal Year 1993					Percent Change, 1992 to 1993				
	Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour		Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour		Number of Credit Hours	Staff Year Faculty	Credit Hours Per Staff Year	Cost per Credit Hour	
				Direct Salary	Total Instruction ¹				Direct Salary	Total Instruction ¹				Direct Salary	Total Instruction ¹
Lower Division	15,678	17.15	914	\$ 35.52	\$ 122.55	13,240	14.66	903	\$ 43.42	\$ 146.21	(15.6)%	(14.5)%	(1.2)%	22.2 %	19.3 %
Chicago State	2,451	1.97	1,244	34.48	145.46	2,183	2.25	970	45.10	160.76	(10.9)	14.2	(22.0)	30.8	10.5
Eastern Illinois	441	0.51	865	54.14	233.86	607	0.74	820	58.65	186.52	37.6	45.1	(5.1)	8.3	(20.2)
Governors State															
Northeastern	579	0.92	629	56.61	141.71	384	0.67	573	76.01	187.11	(33.7)	(27.2)	(8.9)	34.3	32.0
Western Illinois	1,856	2.46	754	55.18	153.42	1,652	1.76	939	50.10	157.00	(11.0)	(28.5)	24.4	(9.2)	2.3
Illinois State	461	0.64	720	41.73	137.56	577	0.68	849	38.24	166.37	25.2	6.3	17.8	(8.4)	20.9
Northern Illinois	3,946	4.53	871	32.54	95.76	3,998	3.31	1,208	37.35	104.46	1.3	(26.9)	38.7	14.8	9.1
Sangamon State															
SIU/Carbondale	2,929	1.52	1,927	17.50	113.75	1,079	0.99	1,090	33.68	277.68	(63.2)	(34.9)	(43.4)	92.5	144.1
SIU/Edwardsville	385	0.51	755	30.98	100.94	259	0.26	996	47.92	116.66	(32.7)	(49.0)	32.0	54.7	15.6
U of I/Chicago															
U of I/Urbana	2,630	4.09	643	38.96	107.07	2,501	4.00	625	43.50	118.75	(4.9)	(2.2)	(2.8)	11.7	10.9
Upper Division	56,776	75.41	753	\$ 54.41	\$ 152.52	56,270	74.13	759	\$ 58.60	\$ 166.28	(0.9)%	(1.7)%	0.8 %	7.7 %	9.0 %
Chicago State	3,373	3.24	1,041	47.62	195.23	2,944	3.33	884	56.58	190.70	(12.7)	2.8	(15.1)	18.8	(2.3)
Eastern Illinois	10,675	15.32	697	63.17	153.18	9,527	14.71	648	67.50	175.79	(10.8)	(4.0)	(7.1)	6.9	14.8
Governors State	842	0.93	905	28.88	126.58	769	0.76	1,012	36.81	145.97	(8.7)	(18.3)	11.8	27.5	15.3
Northeastern	885	1.44	615	56.05	141.71	711	1.19	597	70.71	175.88	(19.7)	(17.4)	(2.8)	26.2	24.1
Western Illinois	3,940	4.72	835	55.05	151.43	4,649	4.47	1,040	47.39	149.39	18.0	(5.3)	24.6	(13.9)	(1.3)
Illinois State	4,695	5.51	852	48.07	129.56	7,324	8.08	906	54.25	169.91	56.0	46.6	6.4	12.9	31.1
Northern Illinois	8,638	13.3	646	59.11	153.42	8,674	9.94	873	58.53	146.66	0.4	(25.7)	35.1	(1.0)	(4.4)
Sangamon State	4			13.75	637.00	4			49.25	158.75	0.0			258.2	(75.1)
SIU/Carbondale	12,316	15.13	814	53.14	158.66	10,236	14.45	708	63.37	187.53	(16.9)	(4.5)	(13.0)	19.3	18.2
SIU/Edwardsville	2,812	2.52	1,116	40.93	111.13	2,472	2.80	883	55.54	127.01	(12.1)	11.1	(20.9)	35.7	14.3
U of I/Chicago															
U of I/Urbana	8,596	13.23	650	53.25	155.26	8,960	14.40	622	55.51	160.48	4.2	8.8	(4.2)	4.2	3.4

¹Excluding costs of physical plant

Sources: Academic Discipline Unit Cost Studies and Faculty Credit Hour Studies for Public Universities

participating in practicums. The average cost per placement was \$161.13, with a wide range from less than \$10 per placement to \$340 per placement in 1988-89. With the increasing emphasis on providing students hands-on practice in teaching, costs have also increased. An unintended consequence of the early retirement program has been the loss of many excellent experienced teachers who previously supervised teacher preparation candidates.

Program Quality and Effectiveness

Common measures of the quality and effectiveness of academic programs are the extent to which graduates obtain jobs, graduates' achievement on licensure or certification examinations required for employment, the satisfaction of graduates with their experience, the currency of the curriculum and instructional equipment and materials, the academic standards and support services maintained, and the qualifications and currency of the faculty. Information on many of these factors is not quantifiable and, therefore, not comparable from one university to another. Since Board of Higher Education data systems do not regularly collect information in these areas, the program review process was established to assure that qualitative information was regularly reviewed by campuses in order to improve academic programs.

Employment patterns analyzed earlier in this report indicated that one year after graduation 70 percent of public university education majors in the class of 1991, compared with 71 percent of all survey respondents in the class of 1991, were employed full time, with 72 percent of those employed full time employed in education-related occupations. Five years after graduation, higher numbers were both employed full time and employed in education-related occupations than were one year after graduation. This follow-up information suggests that Illinois public university teacher preparation programs are generally effective in achieving their purpose.

As a result of the 1985 School Reform Act, the State Teacher Certification Board instituted a testing program for teacher certification effective in fiscal year 1989. Candidates for certification must pass tests in both basic skills (grammar, reading, writing, and mathematics) and in the subject area in which they wish to teach. Test scores are reviewed annually to assure that they are not systematically biased, and the testing program as a whole is currently undergoing an extensive fifth year review. Table 8 shows the total number of public university students tested during the first five years of testing, as well as the number and proportion of students who passed the basic skills and subject matter tests on the first attempt during this period. The table indicates that a high percentage of candidates passed the tests.

Of primary interest in Table 8 is not the slight differences in passing rates among universities, but rather comparisons within universities of passing rates for minority students. Thus, Table 8 also shows the number of black and Hispanic teacher candidates who took and passed the tests by university attended. Since statistical comparisons for groups of 20 or less are distorted, institutional breakdowns were omitted when 20 or fewer students were tested. Discrepancies of 15 percentage points or more between the passing rates for minority students and the passing rates for all candidates tested suggest that minority candidates may have a qualitatively different experience than majority candidates. In six of the 12 public universities, the passing rate for black candidates is more than 15 percentage points lower than the total passing rate on both the basic skills and subject matter tests. Discrepancies greater than 15 percentage points were posted by black candidates on both tests at Southern Illinois University at Edwardsville, Eastern Illinois University, Western Illinois University, Northeastern Illinois University, Southern Illinois University at Carbondale, and Illinois State University. Only two universities had passing rates more than 15 percentage points lower for Hispanic candidates: Southern Illinois University at Carbondale and Northeastern Illinois University. Since it enrolls the highest number of Hispanic candidates of all public universities, the differential scores at Northeastern Illinois University are of more concern. These differences suggest that the universities, as a whole, and teacher preparation programs, specifically, need to pay greater attention

Table 8

**PUBLIC UNIVERSITY STUDENTS' PERFORMANCE IN STATE TEACHER CERTIFICATION TESTS
AGGREGATED FROM FISCAL YEARS 1989 THROUGH 1993**

	Basic Skills Tests									Subject Matter Tests								
	Total			Black			Hispanic			Total			Black			Hispanic		
	N	N Pass	% Pass	N	N Pass	% Pass	N	N Pass	% Pass	N	N Pass	% Pass	N	N Pass	% Pass	N	N Pass	% Pass
TOTAL	34,807	33,166	95 %	2,719	2,155	79 %	976	786	81 %	40,136	37,849	94 %	3,032	2,304	76 %	1,050	881	84 %
Chicago State	1,999	1,654	83	1,248	984	79	115	92	80	2,370	1,847	78	1,463	1,057	72	135	105	78
Eastern Illinois	4,317	4,081	95	98	71	72	*			5,149	4,801	93	112	74	66	22	21	95
Governors State	1,599	1,527	95	220	183	83	39	34	87	1,723	1,631	95	225	190	84	46	40	87
Northeastern Illinois	3,187	2,858	90	267	193	72	314	205	65	3,897	3,537	91	314	231	74	323	232	72
Western Illinois	2,877	2,736	95	94	70	74	47	42	89	3,007	2,819	94	85	61	72	47	44	94
Illinois State	5,347	5,233	98	111	91	82	41	36	88	6,598	6,337	96	135	101	75	50	48	96
Northern Illinois	4,946	4,890	99	83	76	92	82	79	96	5,823	5,718	98	87	77	89	84	81	96
Sangamon State	517	504	97	*			*			554	537	97	*			*		
SIU/Carbondale	2,280	2,178	96	113	88	78	37	26	70	2,656	2,539	96	112	89	79	48	33	69
SIU/Edwardsville	2,766	2,651	96	158	112	71	22	19	86	3,071	2,942	96	130	98	75	22	21	95
U of I/Chicago	2,275	2,178	96	242	209	86	205	183	89	2,440	2,330	95	276	240	87	214	197	92
U of I/Urbana	2,697	2,676	99	74	72	97	55	52	95	2,848	2,811	99	84	79	94	58	58	100

* Fewer than 20 candidates tested

Source: State Teacher Certification Board annual reports

to the campus, program, and clinical experience climate for minority students and to the support services provided for minority students and for underprepared students.

Table 9 presents information on the satisfaction of public university education-degree graduates with their baccalaureate experience. Professional survey researchers indicate that a positive satisfaction rating of 85 percent or higher should be treated as unanimity, since, in their experience, 5 percent of people surveyed are dissatisfied with everything at all times, 5 percent are dissatisfied with everything on the day in which they were surveyed, and 5 percent are dissatisfied with the particular subject of the survey on the day in which they were surveyed. Although the questions differed slightly on the two surveys, public university education majors in the classes of 1991 and 1988 were virtually unanimous in their satisfaction with their jobs, their majors, and the university they attended.

High quality teacher preparation programs require a high level of commitment by the university as a whole. While the education faculty is primarily responsible for the quality of the teacher candidates' understanding of the learning process and child behavior and their competence in structuring curriculum and lessons, materials selection, and teaching strategies (that is, *how* to teach), faculty members from nearly every department across campus are responsible for the teaching candidates' general knowledge and specific understanding of the field in which they will teach (that is, *what* to teach). Thus, every university needs an effective mechanism for planning, coordinating, and evaluating the total teacher preparation program, including the structuring of the curriculum and courses within it, the selection and evaluation of the faculty members who teach the courses and supervise the clinical experiences of the students, and the selection, guidance, and assessment of individual teacher candidates.

For the past decade, public schooling in the United States has been undergoing a transformation prompted first by the publication of *A Nation At Risk* in 1983 and given further impetus by the adoption of National Education Goals by former President Bush in concert with the nation's governors in 1989. Early isolated reform efforts are now coalescing into a systemic reform movement. At the national level, systemic reform is grounded in common goals for learning. To achieve these goals, disciplinary groups are in various stages of developing curriculum, teaching, and student performance standards, as well as assessment protocols for the evaluation of student achievement of them. Mathematics standards--*Curriculum and Evaluation Standards for School Mathematics* and *Professional Standards for Teaching Mathematics*--developed by the National Council of Teachers of Mathematics in 1989 and 1991, respectively, have already been implemented by many schools across the country. Drafts of standards for science, foreign languages, and the arts are expected this summer, with final geography and history standards projected for October 1994 and English by June 1995. Standards are also being developed in civics, economics, physical education, and social studies. The standards are expected to be incorporated into the National Assessment for Educational Progress, a national periodic testing program. Parallel processes have been established at the state and local school district levels. In Illinois, the *State Goals for Learning*, adopted by the State Board of Education in 1985, are the basis for the statewide Illinois Goal Assessment Program and the local school improvement plans that, in turn, are the cornerstones of the State Board of Education's new school recognition process.

In addition to national and state educational goals, standards, and assessment programs, systemic reform is characterized by: (1) individual school-based management and shared decision making among administrators, teachers, parents, and community leaders in order to set priorities and allocate resources to address the learning needs of all children attending the school; (2) commitment to the philosophy that all children can learn if given ample opportunities; and (3) an emphasis on active, inquiry-based learning modes that integrate concepts and applications across subject matter and skills development.

Table 9

SATISFACTION OF PUBLIC UNIVERSITY BACCALAUREATE EDUCATION GRADUATES

	<u>Class of 1991</u> (One Year Later)	<u>Class of 1988</u> (Five Years Later)
Number of Education Majors Responding	1,858	1,218
Percent Female	78 %	78 %
Number Employed Full Time	1,299	1,019
Percent Employed Full Time	70 %	84 %
Number Enrolled Full Time	152	118
Percent Enrolled Full Time	8 %	10 %
<u>Reported Satisfaction</u>		
Percent Satisfied with Job	87 %	92 %
Percent Agreeing Major Prepared Very Well/Adequately for Job	88 %	
Percent Rating Degree Adequate/ Very Adequate Career Preparation		90 %
Percent Positive/Very Positive towards Major	91 %	92 %
Percent Positive/Very Positive towards the University	92 %	96 %

Source: Public Universities' Baccalaureate Graduate Follow-up Studies

Each of these aspects of school reform has implications for the preparation of new teachers, as well as for the continuing professional development of the existing teaching force. Teacher candidates need to understand the national and state goals for learning and the standards being developed in each of the areas in which they plan to teach; to be able to work with other teachers and administrators, parents, and the community in developing and implementing learning experiences effective for children from different cultural and economic backgrounds and with different entering abilities; and to understand how the subjects they plan to teach relate to other subjects and to the real world in order to integrate concepts and applications across the curriculum.

Conclusions and Review Topics

Guidelines for reporting on campus program reviews are provided in the Resource Allocation and Management Program manual for public universities. In the reports submitted to the Board of Higher Education, universities are asked to summarize key review findings and recommendations in the areas of student and occupational demand, centrality to mission, curricular breadth, success of graduates, costs, quality, and productivity. The purpose of this analysis is to identify any specific statewide issues that universities need also to address in their review summaries. The statewide issues to be addressed in campus reviews of baccalaureate teacher preparation programs are highlighted in this section. In their review reports submitted in July 1995, public universities should summarize their conclusions and actions taken to address each issue identified.

Supply and Demand

Supply and demand for elementary teachers and for specialists in art, music, and physical education at the secondary level appear to balance, indicating no further capacity adjustments are needed in these fields. Supply and demand trends for early childhood teachers, particularly when the needs of private and government-sponsored child care facilities are included, suggest a need for continued moderate increases in capacity, either through the approval of additional programs or through increasing enrollments and completers in existing programs. The demand for music, art, and physical education specialists and for bilingual teachers in elementary schools is increasing, as is demand for English as a second language, English, and science teachers in secondary schools, indicating that capacity should also be expanded in these fields. Capacity in other secondary teaching fields should be monitored closely as a result of the expected increase in retirement in 1992-93 and 1993-94.

Colleges and universities are encouraged to eliminate degree programs or certification options in fields too narrowly defined to warrant full-time employment in secondary schools. For example, consideration should be given to discontinuing teacher preparation programs in anthropology, sociology, psychology, and geography and replacing them with broader preparation in all of the social sciences/social studies. Similarly, broad-based preparation in the biological and physical sciences appears to lead to greater opportunities for employment than does a single major in earth science, astronomy, zoology, physiology, chemistry, or physics.

The impact of federal legislation on the need for special education teachers also warrants close monitoring. Current demand, however, indicates that capacity should be increased in programs preparing teachers to work with learning disabled, socially and emotionally disabled, and hearing impaired children. There is also a growing need for teachers prepared across categories and to work with children with multiple disabilities.

In their reviews of teacher preparation programs, the public universities are asked to examine their responses to changes in supply and demand and report on which programs, if any, are being expanded, reduced, or discontinued.

These broad trends, however, mask a more pressing need: The need to increase the number of minority students entering the teaching profession at all levels. Currently, the proportion of minority baccalaureate-level candidates prepared for teacher certification by public universities is less than half of their proportion in the Illinois population and less than a third of their proportion among Illinois K-12 public school children.

In May 1991, the Board of Higher Education endorsed a series of priorities for higher education in working with schools to improve teaching and learning, *Priorities for School-College Partnerships*. This report concluded that, in the area of teacher recruitment, priority should be given to (1) early identification of promising students to facilitate their transition from high school to college and to provide incentives for becoming teachers, (2) encouraging minority students to enter the teaching profession, (3) expanding opportunities for community college students to transfer to teacher preparation programs through program articulation and facilitating the transition of students, and (4) developing alternative routes to teacher certification in order to facilitate the entry of mid-career individuals into the teaching profession.

In their reviews of teacher preparation programs, the public universities are asked to evaluate their early outreach programs, admissions processes, support services, and educational climates for recruiting, enrolling, and retaining through graduation minority teacher candidates, including transfers from community colleges. This review should culminate in adoption of specific steps to be taken to increase minority student participation and achievement. In addition, each public university is asked to evaluate its role in assisting individuals who wish to change careers to enter the teaching profession, especially in those fields in which teachers are in highest demand.

Quality Issues

Follow-up studies of baccalaureate graduates indicate that education majors are employed full time a year after graduation at about the same rate as all other baccalaureate graduates and that they are virtually unanimous in expressing satisfaction with their jobs, their major, and their university baccalaureate experiences. Since future teachers are prepared in nearly every college and department within a university, every university offering teacher preparation programs needs to vest authority for planning, coordinating, and evaluating its total teacher education program in a strong, campus-wide governance body.

Recent national and state efforts to reform schooling suggest that future teachers need knowledge and skills that may not have been emphasized in teacher preparation programs in the past. *Priorities for School-College Partnerships* (May 1991) identified the following priorities for teacher preparation programs: (1) the involvement of schools in the design, development, and evaluation of teacher preparation programs, (2) the provision to teacher candidates of opportunities to train in model schools, and (3) the preparation of prospective teachers for new roles and for teaching students with different learning styles, abilities, and backgrounds.

In their reviews of teacher preparation programs, the public universities are asked to evaluate the effectiveness of the campus group responsible for the planning, coordination, and evaluation of the university's total teacher preparation program and the extent to which it manifests the university's commitment to the preparation of future teachers. Public universities are also asked to evaluate the extent to which: (1) teacher candidates are conversant with national and state goals for learning, the standards being developed in the fields in which they plan to teach, and methods for assessing student achievement of these standards; (2) all baccalaureate teacher candidates are afforded opportunities for clinical experiences in excellent schools; (3) schools used for student clinical placements are actual partners with the university in preparing prospective teachers; (4) teacher candidates are prepared to work together in teams and to involve parents in the education of their children; (5) teacher candidates at completion of the program can employ active, inquiry-based learning modes that integrate concepts and applications in such a way as to engage students from

various ability levels and cultural backgrounds in their own learning; and (6) teacher candidates are facile in using computers and other technology in classroom teaching.

State Policies and Processes

Several issues identified in this analysis need to be addressed at the state level. During the coming year, the staffs of the Board of Higher Education and the State Board of Education, in conjunction with the Joint Education Committee, need to collaborate in examining their differing policies and processes for teacher certification, program approval and review, and professional accreditation to reduce conflicting demands, streamline processes as needed, and provide sufficient flexibility for higher education institutions to meet the often rapidly changing circumstances and expectations of elementary and secondary schools. Together, the staffs also need to collaborate in determining how best to foster school-college partnerships to improve teaching and learning at all levels, including how best to foster partnerships among schools and colleges/universities and with the private sector to improve school-to-work transitions. Finally, both staffs and the Joint Education Committee need to review the level of state support provided for teacher preparation and continuing professional development programs to assure that both the level and mix of support provided are adequate for preparing and developing tomorrow's teachers.

Public universities and nonpublic colleges and universities offering teacher preparation programs are invited to participate in discussion of these state-level issues.

References

- Illinois Board of Higher Education. *Priorities for School-College Partnerships*. May 1991.
- Illinois Board of Higher Education. *Staff Recommendations on Productivity Improvements at Public Universities*. October 1992.
- Illinois Board of Higher Education. *Policy Issues in Education for the Health Professions*. May 1993.
- Illinois Board of Higher Education. *Policy Recommendations for Health Professions' Education*. September 1993.
- Illinois State Board of Education. *Illinois Teacher Supply and Demand, 1988-89: Highlights and Data Tables*. August 1990.
- Illinois State Board of Education. *Illinois Teacher Supply and Demand: 1989-90 and 1990-91 Highlights and Data Tables*. October 1992.
- Illinois State Board of Education. *Directory of Approved Programs for the Preparation of Educational Personnel in Illinois Institutions of Higher Education*. June 1993.
- Illinois Occupational Information Coordinating Committee. *Illinois Occupational Employment, 1990-2005*.
- National Commission on Excellence in Education. *A Nation At Risk*. 1983.
- U.S. Department of Education, National Center for Education Statistics. *New Teachers in the Job Market, 1991 Update*. August 1993.
- U.S. Department of Education, National Center for Education Statistics. *America's Teachers: Profile of a Profession*. May 1993.
- U.S. Department of Labor, Bureau of Labor Statistics. *Outlook 1990-2005*.

STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

REVIEW OF ENGLISH LANGUAGE AND LITERATURE PROGRAMS:
STATEWIDE ANALYSIS

By statute, the Board of Higher Education is responsible for periodically reviewing academic programs offered by all public colleges and universities and by some private colleges and universities. As part of the P•Q•P initiative, the state-level program review process for public university academic programs was revised in 1993-94. This revision calls for public universities to submit reviews of similar programs in the same year within an eight-year review cycle and for the Board of Higher Education staff to identify issues to be addressed in a statewide analysis the year prior to the campus reviews.

The first programs reviewed under this revised process were health professions' education programs. The statewide analysis, *Policy Issues in Education for the Health Professions*, was presented to the Board in May 1993, followed by the adoption of policy recommendations, *Policy Recommendations for Health Professions' Education*, in September 1993. Campus reviews of health professions' education programs were submitted to the Board as part of the annual Resource Allocation and Management Program (RAMP) in July 1994. The results of campus reviews of health professions' education programs will be reported to the Board in the fall, along with recommendations for any further program changes indicated.

University program reviews to be completed in 1994-95 include baccalaureate programs in education, primarily teacher preparation programs, and academic programs at all levels in the fields of English language and literature and mathematics. The purpose of this report is to present a statewide analysis and to define issues in academic programs in English language and literature at all levels preparatory to the public universities' reviews during 1994-95. The English language and literature program area consists of general programs in English and in speech, as well as programs in such specialized fields as comparative literature and both creative and technical writing. The analysis is presented in three sections, with English programs at all three levels examined first, then speech programs at all three levels, and, finally, programs in other specialized fields. Each section examines trends in student enrollment and degrees conferred. The concluding section presents specific issues the universities are asked to address in their review reports submitted in July 1995.

The September 1992 Board of Higher Education report, *Statewide Analysis of the Productivity of Instructional Units at Public Universities*, rated instructional programs using selected quantitative measures of enrollment, degree production, costs, and centrality across disciplines and degree levels at public universities. This analysis showed that baccalaureate English language and literature programs were characterized by high student demand, high degree production, high centrality, and low costs compared to all other bachelor's degree programs. Master's programs were characterized by low student demand, degree production, costs, and centrality compared to all other master's programs, while doctoral programs were characterized by moderate student demand, degree production, and centrality, but high costs, compared to all other doctoral programs.

The November 1993 report, *Priorities, Quality, and Productivity of Illinois Higher Education: Summary and Assessment for 1992-93 and Recommendations for 1993-94*, indicated that one baccalaureate English language and literature program was eliminated and two master's programs were reduced in size. The report concluded that capacity in this program area should be maintained.

English

All 12 public universities offer both bachelor's and master's programs in English, with five public universities offering doctoral programs, as well. Four of the doctoral programs are doctor of philosophy (Ph.D.) programs, while the program at Illinois State University is a Doctor of Arts (D.A.) program specifically designed to provide advanced education in the teaching of English.

Table 1 provides five-year trends in fall enrollment and annual degrees conferred in English by the 12 public universities by degree level. As the table shows, baccalaureate enrollment increased an average of 18 percent from fall 1989 to fall 1993, while the annual number of degrees awarded grew by 30 percent from fiscal year 1989 to fiscal year 1993. Both enrollment and degrees completed, however, varied considerably from one university to another. The largest baccalaureate English programs were at the University of Illinois at Urbana-Champaign, Illinois State University, and Northern Illinois University during this five-year period, while the highest percentage gain in enrollment was at Chicago State University at 80 percent. The average completion ratio--that is, enrollment divided by degrees conferred--was 24 percent for all public universities combined, with a range from seven percent at Chicago State University to 31 percent at both Southern Illinois University at Carbondale and the University of Illinois at Urbana-Champaign.

Fall enrollment in master's degree programs in English grew by 29 percent from fall 1989 to fall 1993, while the number of degree completers increased by 36 percent from fiscal year 1989 to fiscal year 1993. Doctoral enrollment grew by 32 percent in this period, while the number of degrees conferred doubled. Taken together, the graduate programs in English were about one-third the size of the baccalaureate programs in 1993.

Forty-one private colleges and universities offered baccalaureate degree programs in English during this five-year period, eight offered master's degree programs, and three offered doctoral programs. Table 2 presents trends in enrollments and degrees conferred in English at private colleges and universities. Fall enrollment in baccalaureate programs increased by five percent overall, with the largest programs offered by Loyola, DePaul, and Northwestern Universities, the University of Chicago, and Wheaton College. The program at Mundelein College, which merged with Loyola University during this period, is being phased out. As was true with the public universities, the number of baccalaureate completers increased at a higher rate overall, at 27 percent, than the increase in fall enrollment.

Master's degree enrollment in English increased by 54 percent from fall 1989 to fall 1993, while the number of master's degree graduates increased by 64 percent from fiscal year 1989 to fiscal year 1993. Enrollment in the three doctoral programs in private universities increased by five percent, while the number of degrees conferred varied from year to year within each university.

Student demand, thus, continues to be strong for academic programs in English at all three degree levels. No statewide capacity adjustments appear necessary at this time.

Speech

Nine public universities offered baccalaureate programs in speech during the period 1989 to 1993, although the program at Governors State University is being phased out. Eight public universities offered master's degree programs and two offered doctoral programs in speech during this period. In March 1994, the Board of Higher Education authorized the University of Illinois at Chicago to replace its combined baccalaureate program in communication and theatre and the combined master's program in communication and theatre with separate programs in each area at each level.

Trends in enrollment and degrees conferred in speech by both public universities and private colleges and universities are presented on Table 3. At public universities, fall enrollment in speech at the bachelor's level declined by 28 percent, while the annual number of degrees conferred increased by six percent. The overall enrollment decline and increase in degrees conferred, however, masks considerable yearly variations within and among campuses. For example, at Northern Illinois University, fall 1989 enrollment was 294 while fall 1990 enrollment had increased to 893, nearly a three-fold increase. Fall enrollment dropped again to 317 in fall 1993, for a five-year gain of only eight percent. For all public universities, the average ratio of degrees conferred to enrollment was 40 percent. Overall fall baccalaureate enrollment in speech at private colleges and universities increased by 47 percent from fall 1989 to fall 1993, although enrollment declined at 11 of the 17 institutions that offered baccalaureate programs during this period. The number of degrees conferred by private colleges and universities increased by 63 percent. In fall 1993, public universities enrolled 71 percent of the bachelor's degree majors statewide, and, in fiscal year 1993, public universities awarded 79 percent of the bachelor's degrees conferred in speech.

Public university fall enrollment at the master's level increased by 16 percent, with four universities gaining enrollment and four losing enrollment. Only Northwestern University among private institutions offers master's degree programs in speech, with both programs--one of which is new--increasing enrollment. Enrollment increased in both public university doctoral programs in speech, but declined at Northwestern University. At the graduate level, the number of degrees conferred annually fluctuates from year to year at each campus, both public and private. At the master's level, the overall trend in degrees conferred is upward, while the trend in number of doctoral degrees conferred appears to be stable or declining.

Specialized Programs

Specialized programs in English language and literature include programs in comparative literatures and programs in writing, both creative and technical. Among the public universities, the University of Illinois at Urbana-Champaign offers programs in comparative literature at all three levels and a bachelor's program in rhetoric and Illinois State University offers a master's program in writing. In the November 1993 report, *Priorities, Quality, and Productivity of Illinois Higher Education: Summary and Assessment for 1992-93 and Recommendations for 1993-94*, it was recommended that the University of Illinois at Urbana-Champaign consider eliminating its bachelor's, master's, and doctoral degrees in comparative literature. Three private colleges and universities offer bachelor's degrees in comparative literature, three offer master's degrees, and two offer doctoral degrees. Seven private colleges and universities offered bachelor's degrees in writing during this period, with three offering master's degrees and one offering an advanced certificate program (that is, a certificate program beyond the master's degree).

Table 4 provides enrollment and graduation information on the specialized programs at all three levels for both public universities and nonpublic colleges and universities. Statewide, enrollment increased in each type of program at each level from fall 1989 to fall 1993. Enrollment in master's degree programs in writing increased the most, with all three private college and university programs in this area having been initiated during this period. The number of baccalaureate degrees conferred in both comparative literature and in writing increased from fiscal year 1989 to fiscal year 1993, while, as with other graduate programs, the number of graduate degrees conferred varied from year to year by program and institution. The baccalaureate program in comparative literature at the University of Illinois at Urbana-Champaign is the smallest of the three university programs, but its graduate program ranks in size between the graduate programs at Northwestern University and the University of Chicago, when master's and doctoral enrollments are combined.

Statewide Program Review Issues

Guidelines for reporting on campus program reviews are provided in the Resource Allocation and Management Program (RAMP) manual for public universities. In the reports submitted to the Board of Higher Education, universities are asked to summarize key review findings and recommendations in the areas of student and occupational demand, centrality to mission, curricular breadth, success of graduates, costs, quality, and productivity. The purpose of this report is to identify additional specific statewide issues that universities should also address in their review summaries. The statewide issues to be addressed in campus reviews of programs in English, speech, and the specialized programs in the language and literature area are presented in this section. In their review reports submitted in July 1995, public universities should summarize their conclusions and actions taken to address each issue.

Consistent with the statewide priority on improving undergraduate education, in their July 1995 program review reports, the public universities are asked to identify the specific steps they have taken to strengthen courses in English composition and speech, as well as any other courses in these areas, that students complete in fulfillment of general education requirements. In addition, the universities are asked to review the adequacy of the course sequences in English and speech that are completed by students preparing for teacher certification to assure that graduates are competent in both knowledge of the disciplines and in communication skills. Due to the substantial decline in baccalaureate enrollment in speech among public universities, coupled with the increase in master's and doctoral enrollment, public universities are asked to report specifically on the job placement rates and patterns of speech graduates at all levels. Finally, due to the high student demand but consistently weak employment market for graduates of doctoral programs in the liberal arts, public universities should examine the placement of graduates from their doctoral programs in English, speech, and related areas, as well as the regions being served by the university, to determine if adjustments in capacity at the doctoral level are needed.

Table 1

PUBLIC UNIVERSITY DEGREE PROGRAMS IN ENGLISH

	Program Title	Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
Chicago State University	B.A. in English	133	126	110	90	74	79.7 %	10	6	9	4	6	66.7 %	7 %
Eastern Illinois University	B.A. in English	278	229	230	217	219	26.9	54	80	44	48	42	28.6	23
Governors State University	B.A. in English	82	47	53	55	59	39.0	16	13	18	12	8	100.0	23
Northeastern Ill. University	B.A. in English	178	204	193	162	163	9.2	24	33	18	27	27	(11.1)	14
Western Illinois University	B.A. in English	200	222	222	196	180	11.1	47	41	34	29	35	34.3	18
Illinois State University	B.A. and B.S. in English	500	527	496	443	338	47.9	128	113	105	69	78	64.1	21
Northern Illinois University	B.A. in English	461	446	451	407	410	12.4	108	111	124	131	104	3.8	27
Sangamon State University	B.A. in English	77	67	66	56	51	51.0	10	21	12	12	9	11.1	20
S I U - Carbondale	B.A. and B.S. in English	295	254	270	250	225	31.1	66	77	64	58	50	32.0	24
S I U - Edwardsville	B.A. and B.S. in English	99	112	125	123	118	(16.1)	38	51	32	33	24	58.3	31
U of I - Chicago	B.A. in English and American Literature	308	360	328	346	339	(9.1)	97	82	89	89	67	44.8	25
U of I - Urbana/Champaign	B.A. in English	545	551	564	503	495	10.1	181	155	163	180	151	19.9	31
TOTAL		3,156	3,145	3,108	2,848	2,671	18.2 %	779	783	712	692	601	29.6 %	24 %
Chicago State University	M.A. in English	37	31	25	19	19	94.7	7	4	7	9	4	75.0	24
Eastern Illinois University	M.A. in English	39	34	23	23	22	77.3	13	11	14	11	7	85.7	40
Governors State University	M.A. in English	38	41	39	31	20	90.0	9	12	2	4	4	125.0	18
Northeastern Ill. University	M.A. in English	46	38	51	27	23	100.0	4	9	15	12	16	(75.0)	30
Western Illinois University	M.A. in English	53	58	57	51	53	0.0	22	18	23	13	21	4.8	36
Illinois State University	M.A. and M.S. in English	68	73	65	49	42	61.9	22	17	12	10	12	83.3	25
Northern Illinois University	M.A. in English	82	83	91	87	90	(8.9)	37	35	33	24	27	37.0	36
Sangamon State University	M.A. in English	33	32	37	26	32	3.1	10	9	13	6	7	42.9	28
S I U - Carbondale	M.A. in English	77	96	84	80	49	57.1	30	17	14	16	12	150.0	23
S I U - Edwardsville	M.A. in English	53	56	46	58	47	12.8	7	9	10	13	10	(30.0)	19
U of I - Chicago	M.A. in English	100	96	100	107	74	35.1	26	33	18	21	15	73.3	24
U of I - Urbana/Champaign	M.A. in English	53	54	61	56	57	(7.0)	19	22	17	18	16	18.8	33
TOTAL		679	692	679	614	528	28.6 %	206	196	178	157	151	36.4 %	28 %
Illinois State University	D.A. in English	55	61	53	51	50	10.0	6	5	6	5	4	50.0	10
Northern Illinois University	Ph.D. in English	70	63	59	53	55	27.3	6	7	5	1	3	100.0	7
S I U - Carbondale	Ph.D. in English	76	67	58	48	43	76.7	10	5	5	6	4	150.0	10
U of I - Chicago	Ph.D. in English	80	77	70	60	66	21.2	9	5	7	7	6	50.0	10
U of I - Urbana/Champaign	Ph.D. in English	97	88	81	73	73	32.9	15	10	8	9	6	150.0	12
TOTAL		378	356	321	285	287	31.7 %	46	32	31	28	23	100.0 %	10 %

Source: Fall Enrollment and Degrees Conferred Surveys

Table 2

PRIVATE COLLEGE AND UNIVERSITY DEGREE PROGRAMS IN ENGLISH

Program Title	Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
	1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
Augustana College	93	102	126	108	93	0.0 %	48	55	50	36	30	60.0 %	42 %
Aurora University	7	9	3	3	5	40.0	3	0	4	2	1	200.0	37
Aurora University	2	0	0	0	0		0	0	0	0	0		0
Barat College	10	10	13	21	27	(63.0)	4	3	6	11	4	0.0	35
Blackburn College	9	10	12	11	8	12.5	4	4	0	1	2	100.0	22
Bradley University	98	94	87	74	68	44.1	24	17	20	13	6	300.0	19
College of St. Francis	27	26	28	28	20	35.0	7	9	7	2	4	75.0	22
Concordia University	11	10	8	4	5	120.0	3	2	2	5	2	50.0	37
DePaul University	219	216	214	187	161	36.0	55	58	39	40	34	61.8	23
East-West University	15	9	2	2	6	150.0	1	0	0	1	0		6
Elmhurst College	66	58	59	67	61	8.2	13	19	19	16	13	0.0	26
Eureka College	23	22	23	26	23	0.0	1	7	7	8	4	(75.0)	23
Greenville College	26	17	19	20	20	30.0	6	7	3	7	2	200.0	25
Illinois Benedictine College	77	85	86	82	80	(3.8)	15	35	17	20	10	50.0	24
Illinois College	18	26	24	23	29	(37.9)	13	8	9	9	5	160.0	37
Illinois Institute of Technology	6	7	8	10	8	(25.0)	3	2	1	1	1	200.0	21
Illinois Wesleyan University	92	93	85	77	64	43.8	16	16	17	21	8	100.0	19
Judson College	3	6	7	6	4	(25.0)	5	3	3	3	1	400.0	58
Knox College	14	10	13	14	18	(22.2)	0	10	6	11	10	(100.0)	54
Lake Forest College	64	58	56	57	59	8.5	25	25	25	26	26	(3.8)	43
Lewis University	25	21	16	17	19	31.6	5	3	3	9	3	66.7	23
Loyola University of Chicago	315	330	346	269	270	16.7	75	100	64	71	71	5.6	25
MacMurray College	12	9	5	6	10	20.0	2	3	3	3	3	(33.3)	33
McKendree College	14	14	21	20	18	(22.2)	2	5	3	3	5	(60.0)	21
Millikin University	43	45	78	82	71	(39.4)	15	9	16	21	8	87.5	22
Monmouth College	36	32	39	41	35	2.9	4	9	10	11	5	(20.0)	21
Mundelein College	0	0	26	34	31	(100.0)	4	5	14	7	4	0.0	37
National-Louis University	11	7	7	7	3	266.7	5	4	3	1	0		37
North Central College	34	39	36	36	27	25.9	13	23	19	15	14	(7.1)	49
North Park College	47	45	32	47	40	17.5	8	10	15	8	11	(27.3)	25
Northwestern University	209	258	268	304	274	(23.7)	100	115	125	98	90	11.1	40
Olivet Nazarene University	53	55	45	39	34	55.9	10	7	9	6	5	100.0	16
Principia College	23	46	53	40	45	(48.9)	25	25	17	16	25	0.0	52
Quincy University	33	30	13	26	23	43.5	9	8	13	5	4	125.0	31
Rockford College	53	31	34	35	32	65.6	10	11	15	11	7	42.9	29
Roosevelt University	49	55	52	45	50	(2.0)	12	13	14	5	10	20.0	22
Roosevelt University	0	0	0	0	0		0	0	1	0	0		
Rosary College	34	37	51	62	54	(37.0)	8	18	25	16	21	(61.9)	37
St Xavier University	67	57	49	50	38	76.3	8	12	14	11	12	(33.3)	22
Trinity Christian College	13	18	9	14	21	(38.1)	3	6	6	2	3	0.0	27
Trinity College	7	14	9	12	11	(36.4)	4	0	1	1	2	100.0	15
University of Chicago	169	194	210	215	187	(9.6)	92	85	74	79	52	76.9	39
Wheaton College	186	174	147	140	143	30.1	53	39	56	40	44	20.5	29
TOTAL	2,313	2,379	2,419	2,361	2,195	5.4 %	713	790	755	672	562	26.9 %	30 %

Table 2, Continued

PRIVATE COLLEGE AND UNIVERSITY DEGREE PROGRAMS IN ENGLISH

		Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
Program Title		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
Bradley University	M.A. in English	15	11	9	7	8	87.5	3	1	6	1	2	50.0	26
DePaul University	M.A. in English	69	69	65	44	44	56.8	23	17	9	12	7	228.6	23
Loyola University of Chicago	A.M. in English	16	21	22	26	22	(27.3)	11	11	7	9	12	(8.3)	47
Northwestern University	M.A. in English	79	87	70	32	30	163.3	41	34	34	30	20	105.0	53
Rockford College	M.A. in English	3	2	2	0	5	(40.0)	1	1	0	3	2	(50.0)	58
Roosevelt University	M.A. in English	25	17	16	16	15	66.7	3	4	0	0	2	50.0	10
St Xavier University	M.A. in English	25	25	18	17	0		7	1	0	0	0		9
University of Chicago	M.A. in English Language and Literature	37	53	35	51	51	(27.5)	47	35	41	48	38	23.7	92
	TOTAL	269	285	237	193	175	53.7 %	136	104	97	103	83	63.9 %	45 %
Loyola University of Chicago	Ph.D. in English	76	65	54	45	47	61.7	2	3	2	4	8	(75.0)	7
Northwestern University	Ph.D. in English	0	20	22	71	57	(100.0)	6	6	3	6	6	0.0	16
University of Chicago	Ph.D. in English Language and Literature	146	139	130	127	107	36.4	7	12	11	9	8	(12.5)	7
	TOTAL	222	224	206	243	211	5.2	15	21	16	19	22	(31.8)%	8 %

¹Programs have been eliminated.

Source: Fall Enrollment and Degrees Conferred Surveys

Table 3
DEGREE PROGRAMS IN SPEECH

		Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
Program Title		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
Public Universities														
Eastern Illinois University	B.A. in Speech Communication	321	367	448	479	557	(42.4)%	172	198	180	174	137	25.5 %	40 %
Governors State University	B.A. in Speech-Communication Studies ¹	8	21	23	16	16	(50.0)	10	4	8	10	9	11.1	49
Northeastern Ill. University	B.A. in Speech	94	106	129	122	95	(1.1)	33	45	24	34	27	22.2	30
Illinois State University	B.A. and B.S. in Speech Communication	151	175	177	145	175	(13.7)	80	66	62	71	62	29.0	41
Northern Illinois University	B.A. and B.S. in Communication Studies	317	720	771	893	294	7.8	223	243	280	220	234	(4.7)	40
SIU - Carbondale	B.A. and B.S. in Speech Communication	247	287	348	360	316	(21.8)	159	114	116	92	76	109.2	36
SIU - Edwardsville	B.A. and B.S. in Speech Communication	73	87	92	84	74	(1.4)	35	40	30	33	28	25.0	40
U of I - Chicago	B.A. in Communication and Theater	302	302	399	412	419	(27.9)	88	123	132	112	107	(17.8)	31
U of I - Urbana/Champaign	B.A. in Speech Communication	301	348	433	576	583	(48.4)	195	245	228	236	263	(25.9)	52
TOTAL		1,814	2,413	2,820	3,087	2,529	(28.3)%	995	1,078	1,060	982	943	5.5 %	40 %
Private Universities														
Eastern Illinois University	M.A. in Speech Communication	33	33	35	21	24	37.5	16	13	12	11	10	60.0	42
Governors State University	M.A. in Communication Studies	63	61	70	46	32	96.9	32	28	11	12	19	68.4	38
Northeastern Ill. University	M.A. in Speech	13	19	14	22	24	(45.8)	9	10	6	3	7	28.6	38
Northern Illinois University	M.A. in Communication Studies	78	77	69	58	53	47.2	34	29	22	11	22	54.5	35
SIU - Carbondale	M.A. and M.S. in Speech Communication	10	17	22	19	22	(54.5)	16	7	14	10	10	60.0	63
SIU - Edwardsville	M.A. and M.S. in Speech	87	99	96	86	70	24.3	56	58	41	27	20	180.0	46
U of I - Chicago	M.A. in Communication and Theater	48	55	68	75	55	(12.7)	20	22	11	16	23	(13.0)	31
U of I - Urbana/Champaign	M.A. in Speech Communication	25	24	26	29	28	(10.7)	14	14	14	15	10	40.0	51
TOTAL		357	385	400	356	308	15.9 %	197	181	131	105	121	62.8 %	41 %
Graduate Programs														
SIU - Carbondale	Ph.D. in Speech Communication	61	59	54	61	50	22.0	8	14	12	14	7	14.3	19
U of I - Urbana/Champaign	Ph.D. in Speech Communication	34	35	31	24	21	61.9	3	6	9	3	5	(40.0)	18
TOTAL		95	94	85	85	71	33.8 %	11	20	21	17	12	(8.3)%	19 %

Table 3, Continued

DEGREE PROGRAMS IN SPEECH, CONTINUED

		Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
Program Title		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
Private Institutions														
Augustana College	B.A. in Speech	25	27	33	30	32	(21.9)%	18	22	17	15	14	28.6 %	59 %
Blackburn College	B.A. in Speech Communication	3	8	6	10	10	(70.0)	2	3	2	1	2	0.0	27
Bradley University	B.A./B.S. in Speech Communication ¹	0	0	1	2	6	(100.0)	1	2	3	4	7	(85.7)	189
Bradley University	B.A./B.S. in Communication-Speech	20	20	26	20	22	(9.1)	0	0	5	3	3	(100.0)	10
Concordia University	B.A. in Speech Debate and Forensics	0	3	0	1	1	(100.0)	0	0	0	0	3	(100.0)	60
Elmhurst College	B.A. and B.S. in Speech Communication	31	40	47	39	47	(34.0)	8	8	9	7	3	166.7	17
Eureka College	B.A. in Speech Communications	4	3	8	8	8	(50.0)	3	1	3	2	2	50.0	35
Greenville College	B.A. in Speech Communications	13	21	29	29	21	(38.1)	5	6	4	2	0		15
Greenville College	B.A. and B.S.Ed. in Speech	6	1	2	3	2	200.0	0	2	1	1	0		29
Judson College	B.A. in Commun. Arts - Speech/Drama	9	0	0	0	6	50.0	0	0	2	0	0		13
Lewis University	B.A. in Speech/Drama	3	8	4	8	12	(58.3)	2	1	2	3	2	0.0	27
McKendree College	B.A. in Speech	12	13	17	12	18	(33.3)	4	8	0	5	2	100.0	26
Monmouth College	B.A. in Speech Communication Arts	31	25	33	43	39	(20.5)	6	15	10	8	11	(45.5)	29
North Central College	B.A. in Speech Communications/Theatre	81	35	42	43	27	200.0	57	14	17	10	15	280.0	50
North Park Coll + Theol Semina	B.A. in Speech Communications	30	29	12	30	35	(14.3)	11	11	16	9	24	(54.2)	52
Northwestern University	B.S.Sp. in Communication Studies	275	282	296	0	0		91	113	98	0	0		35
Olivet Nazarene University	B.A. in Speech Communication	73	62	59	59	67	9.0	9	13	9	12	22	(59.1)	20
Roosevelt University	B.A. in Speech	26	24	30	16	13	100.0	9	9	7	6	9	0.0	37
Wheaton College	B.A. in Communication	111	102	141	150	149	(25.5)	44	52	47	40	47	(6.4)	35
TOTAL		755	703	786	503	515	46.6 %	270	280	252	128	166	62.7 %	34 %
Northwestern University	M.A. in Communication Studies	32	24	24	0	0		8	8	30	0	0		58
Northwestern University	M.S.C. in Communications	61	0	0	0	0		29	0	0	0	0		48
TOTAL		93	24	24	0	0		37	8	30	0	0		53 %
Northwestern University	Ph.D. in Communication Studies	7	39	41	39	39	(82.1)%	6	5	5	6	7	(14.3)%	18 %

¹Programs have been eliminated.

Source: Fall Enrollment and Degrees Conferred Surveys

Table 4

SPECIALIZED LANGUAGE AND LITERATURE DEGREE PROGRAMS

Program Title		Fall Enrollment					Percent Change	Fiscal Year Degrees Conferred					Percent Change	Completion Ratio
		1993	1992	1991	1990	1989		1993	1992	1991	1990	1989		
U of I - Urbana/Champaign	B.A. in Comparative Literature	10	5	7	9	11	(9.1)%	1	3	5	1	2	(50.0)%	29 %
Lake Forest College	B.A. in Comparative Literature	0	1	0	2	2	(100.0)	1	1	0	2	0		80
Northwestern University	B.A. in Comparative Literature	19	19	22	28	24	(20.8)	8	7	11	13	3	166.7	38
Roosevelt University	B.A. in Comparative Literature	38	7	0	0	1	3,700.0	14	0	0	0	0		30
TOTAL		67	32	29	39	38	76.3 %	24	11	16	16	5	380.0 %	35 %
U of I - Urbana/Champaign	B.A. in Rhetoric	125	156	171	147	144	(13.2)	69	62	51	60	37	86.5	38
Aurora University	B.A. in Writing and Language	14	13	9	9	5	180.0	1	2	3	0	2	(50.0)	16
Blackburn College	B.A. in Written Communication	3	11	13	14	13	(76.9)	10	5	1	2	3	233.3	39
Knox College	B.A. in English - Writing	32	33	32	30	29	10.3	11	15	12	13	23	(52.2)	47
Millikin University	B.A. in English Creative Writing	17	22	0	0	0		9	7	0	0	0		1
Mundelein College	B.A. in English: Writing ¹	0	0	13	7	9	(100.0)	1	2	2	3	1	0.0	31
North Central College	B.A. in Creative Writing	16	0	0	0	0		0	0	0	0	0		
Rosary College	B.A. in Business Writing	2	1	3	3	1	100.0	1	3	0	0	0		
TOTAL		209	236	241	210	201	4.0 %	102	96	69	78	66	54.5 %	37 %
U of I - Urbana/Champaign	M.A. in Comparative Literature	13	14	17	17	13	0.0	7	6	6	7	4	75.0	41
Northwestern University	M.A. in Comparative Literature	2	2	3	1	4	(50.0)	0	0	2	1	0		25
Roosevelt University	M.A. in Comparative Literature	1	4	2	3	1	0.0	0	0	0	0	0		
University of Chicago	M.A. in Comparative Studies in Literature	8	11	2	10	4	100.0	11	8	4	4	6	83.3	94
TOTAL		24	31	24	31	22	9.1 %	18	14	12	12	10	80.0 %	50 %
Illinois State University	M.A. and M.S. in Writing	28	19	14	16	15	86.7	3	7	2	5	9	(66.7)	28
DePaul University	M.A. in Writing	62	58	0	0	0		11	5	1	0	0		14
Illinois Inst. of Technology	M.S. in Technical Commun. & Information	4	0	0	0	0		0	0	0	0	0		
National-Louis University	M.S. in Written Communication	13	2	1	0	0		0	0	0	0	0		
TOTAL		107	79	15	16	15	613.3 %	14	12	3	5	9	55.6 %	19 %
Illinois Inst. of Technology	C.A.S. in Technical Commun. & Information	19	18	18	24	25	(24.0)	6	12	11	13	16	(62.5)%	56 %
U of I - Urbana/Champaign	Ph.D. in Comparative Literature	19	20	18	16	16	18.8	2	2	3	4	6	(66.7)	19
Northwestern University	Ph.D. in Comparative Literature	15	6	10	13	15	0.0	4	2	0	0	0		10
University of Chicago	Ph.D. in Comparative Studies in Literature	35	27	31	32	27	29.6	2	2	0	1	1	100.0	4
TOTAL		69	53	59	61	58	19.0 %	8	6	3	5	7	14.3 %	10 %

¹Program was eliminated.

STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

REVIEW OF MATHEMATICS PROGRAMS:
STATEWIDE ANALYSIS

By statute, the Board of Higher Education is responsible for periodically reviewing academic programs offered by all public colleges and universities and by some private colleges and universities. As part of the P*Q*P initiative, the state-level program review process for public university academic programs was revised in 1993-94. This revision calls for public universities to submit reviews of similar programs in the same year within an eight-year review cycle and for the Board of Higher Education staff to identify issues to be addressed in a statewide analysis the year prior to the campus reviews.

The first programs reviewed under this revised process were health professions' education programs. The statewide analysis, *Policy Issues in Education for the Health Professions*, was presented to the Board in May 1993, followed by the adoption of policy recommendations, *Policy Recommendations for Health Professions' Education*, in September 1993. Campus reviews of health professions' education programs were submitted to the Board as part of the annual Resource Allocation and Management Program (RAMP) in July 1994. The results of campus reviews of health professions' education programs will be reported to the Board in the fall, along with recommendations for any further program changes indicated.

University program reviews to be completed in 1994-95 include baccalaureate programs in education, primarily teacher preparation programs, and academic programs at all levels in the fields of English language and literature and mathematics. The purpose of this report is to present a statewide analysis and to define issues in mathematics programs at all levels preparatory to the public universities' reviews during 1994-95. The first section analyzes fall enrollment and annual degrees conferred at the bachelor's, master's, and doctoral levels. The concluding section presents specific issues the universities are asked to address in their mathematics program review reports submitted in July 1995.

The September 1992 Board of Higher Education report, *Statewide Analysis of the Productivity of Instructional Units at Public Universities*, rated instructional programs using selected quantitative measures of enrollment, degree production, costs, and centrality across disciplines and degree levels at public universities. That analysis showed that both bachelor's and master's degree programs in mathematics were characterized by low student demand, moderate degree completions and costs, and high centrality. Doctoral mathematics programs were characterized by moderate student demand, low degree production, and high cost and centrality.

The November 1993 report, *Priorities, Quality, and Productivity of Illinois Higher Education: Summary and Assessment for 1992-93 and Recommendations for 1993-94*, documented that one program each at the bachelor's, master's, advanced certificate, and doctoral levels was eliminated. In addition, one baccalaureate and one master's program were reduced in size. The report also documented that high costs of programs in the field continued but that completion rates in graduate programs had improved. No further capacity adjustments in mathematics were recommended at that time.

Mathematics Enrollment and Degree Trends

Eleven of the 12 public universities offered both bachelor's and master's programs in mathematics, and four public universities offered doctoral programs in mathematics between 1989 and 1993. Table 1 presents recent trends in fall enrollment from fall 1989 to fall 1993 and in degrees conferred from fiscal year 1989 to fiscal year 1993 for public university mathematics programs at all three levels. Fall enrollment in bachelor's degree programs held steady overall, although seven universities increased and four decreased enrollment during this period. The number of annual degrees conferred declined slightly, by seven percent overall.

Fall enrollment in master's programs increased by four percent overall, while the number of degrees conferred increased by 13 percent, although increases and declines varied among universities and from year to year. Doctoral enrollment increased at two public universities and declined at two public universities, resulting in an overall 19 percent decline. As with other doctoral programs, the annual number of degrees conferred varied from year to year, although the statewide trend appears to be in a positive direction.

Forty-one private colleges and universities offered baccalaureate programs in mathematics between 1989 and 1993, seven offered master's degree programs, and three offered doctoral programs. Table 2 presents fall enrollment and degrees-conferred information for private colleges and universities that offered mathematics programs during this period. Overall, baccalaureate enrollment in private institution mathematics programs increased by 15 percent, and the number of degrees conferred increased by six percent from 1989 to 1993. Fall enrollment in master's programs increased by four percent in private institutions, the same percentage as in public universities, but the number of master's degrees conferred in mathematics by private institutions increased by 55 percent. Doctoral enrollment declined, while the number of doctoral degrees conferred varied by year and university.

Private colleges and universities enrolled 43 percent of the baccalaureate students in mathematics in fall 1993 and graduated 48 percent of the baccalaureate mathematics graduates in fiscal year 1993. On the other hand, public universities enrolled three-quarters of the mathematics graduate students in fall 1993 and conferred three-quarters of the graduate degrees in mathematics in fiscal year 1993.

Table 3 shows enrollments in and graduates from both public and private university programs in applied mathematics, including statistics, at all three levels. Two public and two private universities offered baccalaureate programs in applied mathematics during this period, with one public and one private university each offering two such programs during the period. Fall baccalaureate enrollment held constant, while the number of annual degrees conferred declined between 1989 and 1993.

Table 3 also shows that three public and four private universities offered master's programs in applied mathematics, again with one public and one private university each offering two master's programs. While the overall master's enrollment and the number of graduates were stable from 1989 to 1993, four programs posted declines and five posted gains. Doctoral enrollment and the number of degrees awarded also remained essentially steady overall, with three universities offering programs.

Statewide Program Review Issues

Guidelines for reporting on campus program reviews are provided in the Resource Allocation and Management Program manual for public universities. In the reports submitted to the Board of Higher Education, universities are asked to summarize key review findings and recommendations in the areas of student and occupational demand, centrality to mission, curricular breadth, success of graduates, costs, quality, and productivity. The purpose of this analysis is to identify additional specific statewide issues that universities should also address in their program review summaries. The statewide issues to be addressed in campus reviews of mathematics programs are presented in this

section. In their review reports submitted in July 1995, public universities should summarize their conclusions and actions taken to address each issue.

Reports issued by the National Science Foundation, the American Association for the Advancement of Science, the National Research Council, and mathematical societies such as the Mathematical Association of America have for the last several years called for improving the mathematical and quantitative literacy of the "average" U.S. citizen. At the elementary and secondary level, the National Council of Teachers of Mathematics was the first organization to tackle the development of mathematics content and teaching standards for schools.

Consistent with the need identified by these organizations for higher levels of numeracy among all Americans and consistent with the state's priority on improving undergraduate education, in their July 1995 program review reports, the public universities are asked to identify the specific steps they have taken to strengthen the teaching of beginning mathematics courses, especially those courses that students complete in fulfillment of general education requirements and those courses required by various baccalaureate majors other than a major in mathematics. Public universities are asked specifically to evaluate the extent to which various innovations in teaching and learning methodologies and formats have been successful in improving the mathematical competence of different groups of students.

In addition, the public universities are asked to evaluate the extent to which the course sequences required of students preparing for teacher certification are adequate in assuring that graduates are competent to teach mathematics according to the standards established by the National Council of Teachers of Mathematics.

Although no capacity adjustments in mathematics or applied mathematics programs are indicated at this time, public universities are asked to report specifically on the job placement rates and employment patterns of mathematics graduates at all levels.

Table 1
PUBLIC UNIVERSITY DEGREE PROGRAMS IN MATHEMATICS

		Fall Enrollment						Fiscal Year Degrees Conferred						Completion
	Program Title	1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	Ratio
Chicago State University	B.S. in Mathematics	92	87	91	69	75	22.7 %	11	12	11	9	4	175.0 %	11 %
Eastern Illinois University	B.A. in Mathematics	124	103	115	119	109	13.8	21	32	30	18	20	5.0	21
Northeastern Ill. University	B.A. in Mathematics	103	123	119	93	97	6.2	20	14	9	16	18	11.1	14
Western Illinois University	B.S. in Mathematics	181	197	186	199	205	(11.7)	13	17	16	21	17	(23.5)	9
Illinois State University	B.A. and B.S. in Mathematics	260	264	262	304	257	1.2	55	51	67	51	50	10.0	20
Northern Illinois University	B.S. in Mathematical Sciences	271	273	290	246	213	27.2	63	66	43	49	60	5.0	22
Sangamon State University	B.A. in Mathematical Sciences	30	26	21	14	17	76.5	2	2	2	3	4	(50.0)	12
S I U—Carbondale	B.A. and B.S. in Mathematics	115	122	118	101	128	(10.2)	21	12	29	35	29	(27.6)	22
S I U—Edwardsville	B.A. and B.S. in Mathematical Studies	65	85	75	89	100	(35.0)	25	35	22	32	24	4.2	33
U of I—Chicago	B.S. in Mathematics	31	36	33	30	13	138.5	10	11	17	15	18	(44.4)	50
U of I—Urbana/Champaign	B.S. in Mathematics	119	112	148	158	169	(29.6)	31	39	30	33	48	(35.4)	26
TOTAL		1,391	1,428	1,458	1,422	1,383	0.6 %	272	291	276	282	292	(6.8)%	20 %
Chicago State University	M.S. in Mathematics	28	30	20	23	19	47.4	1	6	3	1	3	(66.7)	12
Eastern Illinois University	M.A. in Mathematics	19	16	21	17	21	(9.5)	6	6	7	6	12	(50.0)	39
Northeastern Ill. University	M.S. and M.A. in Mathematics	62	49	63	50	52	19.2	16	22	18	25	20	(20.0)	37
Western Illinois University	M.S. in Mathematics	22	15	16	23	16	37.5	8	10	8	5	0		34
Illinois State University	M.A. and M.S. in Mathematics	35	29	34	43	34	2.9	13	12	12	13	14	(7.1)	37
Northern Illinois University	M.S. in Mathematics	45	36	36	25	34	32.4	8	7	11	11	6	33.3	24
Sangamon State University	M.A. in Mathematical Sciences	53	56	66	48	48	10.4	22	9	16	17	12	83.3	28
S I U—Carbondale	M.A. and M.S. in Mathematics	21	16	29	39	33	(36.4)	7	10	11	11	6	16.7	33
S I U—Edwardsville	M.S. in Mathematics	56	57	47	53	52	7.7	12	14	9	17	7	71.4	22
U of I—Chicago	M.A. and M.S. in Mathematics	94	127	75	87	72	30.6	31	42	34	30	27	14.8	36
U of I—Urbana/Champaign	M.A. and M.S. in Mathematics	74	78	82	82	107	(30.8)	30	31	33	19	29	3.4	34
TOTAL		509	509	489	490	488	4.3 %	154	169	162	155	136	13.2 %	31 %
Northern Illinois University	Ph.D. in Mathematical Sciences	35	39	43	40	19	84.2	7	4	1	0	1	600.0	7
S I U—Carbondale	Ph.D. in Mathematics	15	13	15	13	19	(21.1)	0	17	3	1	4	(100.0)	33
U of I—Chicago	Ph.D. in Mathematics	53	48	99	96	133	(60.2)	24	12	7	10	7	242.9	14
U of I—Urbana/Champaign	Ph.D. in Mathematics	119	117	123	124	102	16.7	14	15	13	12	9	55.6	11
U of I—Chicago	D.A. in Mathematics ¹	0	0	0	0	0		0	0	0	1	0		
TOTAL		222	217	280	273	273	(18.7)%	45	48	24	24	21	114.3 %	13 %

¹Data reported with the Ph.D. program.

Source: Fall Enrollment and Degrees Conferred Surveys

Table 2

PRIVATE COLLEGE AND UNIVERSITY DEGREE PROGRAMS IN MATHEMATICS

Program Title	Fall Enrollment					Percent Change	Fiscal Year Degrees Conferred					Percent Change	Completion Ratio
	1993	1992	1991	1990	1989		1993	1992	1991	1990	1989		
Augustana College	23	28	36	30	37	(37.8)%	13	15	7	13	8	62.5 %	36 %
Aurora University	14	9	13	17	14	0.0	3	7	7	2	1	200.0	30
Barat College	10	10	15	13	11	(9.1)	1	9	1	2	5	(80.0)	31
Blackburn College	5	4	10	8	8	(37.5)	2	3	2	2	1	100.0	29
Bradley University	62	62	52	61	47	31.9	11	13	13	11	12	(8.3)	21
College of St. Francis	35	28	30	23	28	25.0	9	7	7	6	10	(10.0)	27
Concordia University	3	4	4	3	6	(50.0)	1	2	0	4	0		35
DePaul University	102	94	86	81	81	25.9	21	22	14	18	22	(4.5)	22
East-West University	2	1	0	0	0		0	0	0	0	0		0
Elmhurst College	35	42	35	23	18	94.4	10	4	2	6	4	150.0	17
Eureka College	17	14	12	14	17	0.0	1	2	4	6	4	(75.0)	23
Greenville College	15	18	14	10	13	15.4	1	2	4	2	3	(66.7)	17
Illinois Benedictine College	22	29	36	34	30	(26.7)	13	11	8	1	5	160.0	25
Illinois College	12	11	9	12	26	(53.8)	8	5	4	4	2	300.0	33
Illinois Institute of Technology	28	26	19	21	16	75.0	8	1	4	2	2	300.0	15
Illinois Wesleyan University	61	40	32	30	24	154.2	5	7	4	4	8	(37.5)	15
Judson College	0	1	2	1	1	(100.0)	0	2	1	1	1	(100.0)	100
Knox College	12	12	15	10	12	0.0	4	8	1	8	4	0.0	41
Lake Forest College	12	10	13	8	13	(7.7)	2	4	4	5	4	(50.0)	34
Lewis University	22	22	16	13	12	83.3	3	3	3	1	3	0.0	15
Loyola University of Chicago	59	50	55	0	44	34.1	13	11	8	9	8	62.5	24
MacMurray College	11	13	10	7	10	10.0	3	1	0	3	2	50.0	18
McKendree College	28	16	17	14	9	211.1	2	5	3	1	2	0.0	15
Millikin University	27	31	24	30	38	(28.9)	8	10	10	8	8	0.0	29
Monmouth College	15	11	22	18	21	(28.6)	4	7	7	7	4	0.0	33
Mundelein College	0	0	7	7	3	(100.0)	0	1	3	0	2	(100.0)	35
National-Louis University	3	1	0	2	0	ERR	1	0	0	1	0		33
North Central College	25	27	35	30	23	8.7	13	17	9	15	0		39
North Park College	6	4	4	15	23	(73.9)	1	5	7	6	13	(92.3)	62
Northwestern University	61	57	58	51	43	41.9	18	32	20	21	24	(25.0)	43
Olivet Nazarene University	32	25	27	17	22	45.5	2	0	2	9	2	0.0	12
Principia College	8	7	14	12	19	(57.9)	4	5	5	7	2	100.0	38
Quincy University	16	20	6	4	2	700.0	2	4	3	1	3	(33.3)	27
Rockford College	20	18	24	15	17	17.6	4	8	1	7	2	100.0	23
Roosevelt University	25	27	22	22	22	13.6	7	4	5	2	4	75.0	19
Rosary College	13	12	15	16	20	(35.0)	3	1	5	2	6	(50.0)	22
St Xavier University	30	29	34	22	24	25.0	7	4	2	6	6	16.7	18
Trinity Christian College	9	6	4	5	7	28.6	2	1	1	2	1	100.0	23
Trinity College	3	4	6	6	4	(25.0)	0	2	1	0	1	(100.0)	17
University of Chicago	89	90	95	101	95	(6.3)	30	39	49	43	33	(9.1)	41
Wheaton College	67	70	53	50	41	63.4	15	13	14	16	18	(16.7)	27
TOTAL	1,039	983	981	856	901	15.3 %	255	297	245	264	240	6.3 %	27 %

Table 2, Continued

PRIVATE COLLEGE AND UNIVERSITY DEGREE PROGRAMS IN MATHEMATICS

Program Title		Fall Enrollment						Fiscal Year Degrees Conferred						Completion Ratio
		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
DePaul University	M.S. in Mathematical Sciences	61	62	54	39	29	110.3	16	7	5	4	1	1,500.0	13
Illinois Institute of Technology	M.S. in Mathematics	12	6	7	125	57	(78.9)	2	5	1	0	1	100.0	4
Loyola University of Chicago	M.S. in Mathematics	0	0	0	1	0		0	0	1	0	1	(100.0)	200
Northwestern University	M.S. in Mathematics	23	20	18	14	10	130.0	9	9	5	8	5	80.0	42
Rockford College	M.A. and M.S. in Mathematics	5	2	4	2	5	0.0	0	0	1	1	0		11
Roosevelt University	M.S. in Mathematical Science	19	15	11	13	15	26.7	2	2	3	4	2	0.0	18
University of Chicago	M.S. in Mathematics	21	19	20	29	19	10.5	19	27	11	20	21	(9.5)	91
TOTAL		141	124	114	223	135	4.4 %	48	50	27	37	31	54.8 %	26 %
Illinois Institute of Technology	Ph.D. in Mathematics	4	7	4	6	9	(55.6)	0	2	1	2	2	(100.0)	23
Northwestern University	Ph.D. in Mathematics	0	23	27	35	33	(100.0)	7	4	3	6	11	(36.4)	26
University of Chicago	Ph.D. in Mathematics	81	77	74	58	66	22.7	13	8	9	16	8	62.5	15
TOTAL		85	107	105	99	108	(21.3)%	20	14	13	24	21	(4.8)%	18 %

Source: Fall Enrollment and Degrees Conferred Surveys

Table 3
DEGREE PROGRAMS IN APPLIED MATHEMATICS

		Fall Enrollment					Fiscal Year Degrees Conferred							Completion Ratio
Program Title		1993	1992	1991	1990	1989	Percent Change	1993	1992	1991	1990	1989	Percent Change	
U of I—Chicago	B.S. in Statistics and Operations Research	17	15	19	15	17	0.0 %	3	9	4	10	11	(72.7)%	45 %
U of I—Urbana/Champaign	B.S. in Statistics	16	12	15	24	21	(23.8)	2	4	2	3	11	(81.8)	25
U of I—Urbana/Champaign	B.S. in Statistics and Computer Science	19	15	14	9	1	1,800.0	2	3	0	0	0		9
Northwestern University	B.S. in Applied Mathematics	0	0	0	0	0		2	0	0	0	0		
Northwestern University	B.A. in Probability and Statistics	2	6	3	2	4	(50.0)	2	0	1	2	0		29
University of Chicago	B.A. in Statistics	<u>5</u>	<u>2</u>	<u>6</u>	<u>8</u>	<u>13</u>	(61.5)	<u>1</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	(66.7)	<u>56</u>
	TOTAL	59	50	57	58	56	5.4 %	12	22	12	19	25	(52.0)%	32 %
Northern Illinois University	M.S. in Applied Probability and Statistics	26	32	22	15	15	73.3	9	2	11	4	4	125.0	27
SIU—Carbondale	M.S. in Statistics ¹	6	5	3	3	0		4	0	0	0	0		24
U of I—Urbana/Champaign	M.S. in Applied Mathematics	30	25	24	40	21	42.9	12	22	28	21	14	(14.7)	69
U of I—Urbana/Champaign	M.A. and M.S. in Statistics	13	17	24	26	27	(51.9)	11	15	10	13	18	(38.9)	63
DePaul University	M.B.A. in Operations Research (Quantitati	9	11	12	12	12	(25.0)	4	2	1	0	4	0.0	20
Illinois Institute of Technology	M.S. in Operations Research ¹	0	0	6	10	14	(100.0)	0	5	3	5	3	(100.0)	53
Illinois Institute of Technology	M.S. in Applied Mathematics	1	3	2	1	0		1	0	0	0	0		14
Northwestern University	M.S. in Probability and Statistics	7	7	9	1	3	133.3	6	1	3	3	0		48
University of Chicago	M.A. and M.S. in Statistics	<u>8</u>	<u>7</u>	<u>6</u>	<u>9</u>	<u>10</u>	(20.0)	<u>2</u>	<u>5</u>	<u>2</u>	<u>4</u>	<u>4</u>	(50.0)	<u>43</u>
	TOTAL	100	107	108	117	102	(2.0)%	49	52	58	50	47	4.3 %	48 %
U of I—Urbana/Champaign	Ph.D. in Statistics	16	19	26	26	29	(44.8)	1	4	5	7	3	(66.7)	17
Northwestern University	Ph.D. in Applied Mathematics	19	0	0	0	0		0	0	0	0	2	(100.0)	11
Northwestern University	Ph.D. in Probability and Statistics	0	3	3	13	10	(100.0)	1	2	1	0	0		14
University of Chicago	Ph.D. in Statistics	<u>24</u>	<u>23</u>	<u>23</u>	<u>22</u>	<u>14</u>	<u>71.4</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>3</u>	<u>33.3</u>	<u>18</u>
	TOTAL	59	45	52	61	53	11.3 %	6	10	11	10	8	(25.0)%	17 %

¹Programs were eliminated.

Source: Fall Enrollment and Degrees Conferred Surveys